TECHNOLOGY DEPT.

NEW EQUIPMENT DIGEST

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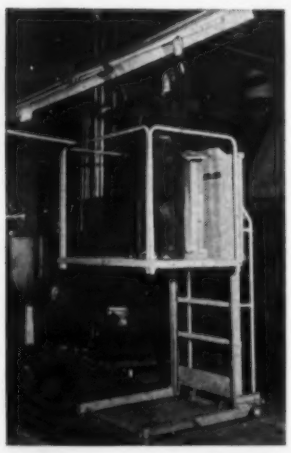
EQUIPMENT MATERIALS • PROCESSES • DESIGNS • APPLICATIONS • LITERATURE

RIGHT-ANGLE GEARMOTOR
1-hp unit has explosionproof motor

Designed for operation under explosive conditions, type SESV-GW Syncro-gear right-angle gearmotor is available in 1-hp ratings with speeds from 45 to 153 rpm and has explosionproof motor. It complies with UL specifications for Class I Group D and Class II Groups F and G service. Cantilever design protects gear alignment, mounting stresses being absorbed by the one-piece base. Unit has splash lubrication, hardened and ground worm, normalized castings and asbestos-protected windings. Made by **U. S. Electrical Motors Inc.**, Dept. NED, 200 E. Slauson Ave., Los Angeles 54, Calif.

▲ For more details circle **NED-1 A4** on enclosed inquiry slip ▲

LIFTING UNIT
raised by man on platform



Man on the platform of the Bootstrapper lifting unit can raise himself and the platform with a hand cranked winch. Capacity of the unit is 500 lb and its platform measures 36 x 60 in. It has removable pipe railings and is of the cantilever type. Caster steering and foot operated floor lock are incorporated. Lifter shown has a lift of 5 ft, but higher lifts are available, with or without pipe lowering hinge to permit passage through doorways. Made by **Service Caster & Truck Corp.**, 578 N. Brownswood Ave., Albion, Mich.

▲ For more details circle **NED-2 A4** on enclosed inquiry slip ▲

ELECTRIC HOISTS
eight models rated ¼ to 2 tons

High torque electric motors with 30-minute, 55° C time rating are incorporated in line of eight Chester electric hoists rated at ¼ to 2 tons capacity. Also featured are triple reduction gearing under continual lubrication; dual braking on load and motor; and availability of stationary lug, single hook or plain trolley suspensions, latter being adaptable to all monorails and standard I-beams. Either motor or load brake can hold the rated load indefinitely suspended, even when power fails. Five models have flexible wire rope cable lift and pendant pushbutton control and three have welded alloy steel link chain lift and pendant rope control. Made by **National Screw & Mfg. Co.**, Chester Hoist Div., Dept. D, Lisbon, O.

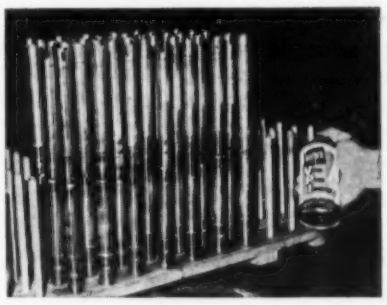
▲ For more details circle **NED-3 A4** on enclosed inquiry slip ▲

HINGED CONVEYOR UNIT
tilts upward for free truck passage

Free passage for workers or trucks in aisleways crossed by plant conveyors is provided by this hinged roller conveyor unit. Mounted like a drawbridge, conveyor unit is counterweighted for ease of tilting. Made by **Alvey Conveyor Mfg. Co.**, 9259 Olive Street Rd., St. Louis 24, Mo.

▲ For more details circle **NED-4 A4** on enclosed inquiry slip ▲

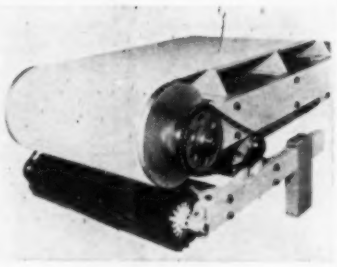
RUST CONTROL COMPOUND
packaged in aerosol dispenser



Vapor phase inhibitor for corrosion and rust protection is now available in crystal form packaged in an aerosol can under 40 psi pressure. This method lends itself to simple, measured and economical application of the substance, which is nonflammable, nontoxic and harmless to the skin. Compound eliminates need for storage greasing and degreasing, provides long term protection for products in closed containers and can be used on all ferrous metals. Made by **Protective Coatings Corp.**, Dept. PD, Park Ridge, Ill.

▲ For more details circle **NED-5 A4** on enclosed inquiry slip ▲

CONVEYOR CLEANING BRUSH
is driven from conveyor head pulley



Conveyor belt cleaning brush is mounted under end of belt run and is powered by chain drive from a countershaft driven from the conveyor head pulley. Frame supporting brush has counterweights at the rear which are used to vary brush pressure on belt, and brush speed is varied by changing pulley diameters. Different types of brush are available in standard conveyor widths for specific applications. Made by **Fuller Brush Co.**, Industrial Div., Dept. NED, 3530 Main St., Hartford 2, Conn.

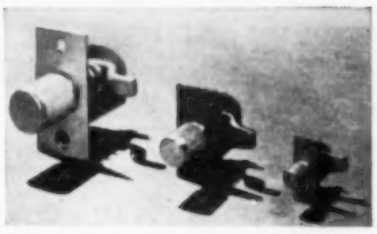
▲ For more details circle **NED-6 A4** on enclosed inquiry slip ▲

FAUCET WASHERS
are fiber glass reinforced

Fabricated from a du Pont compound reinforced by bonding to Fiberglas fabric, Easy-Tite faucet washers combine tensile strength with resistance to heat and water-carried impurities. Design minimizes spreading, splitting and mushrooming out. Made by **J. A. Sexauer Mfg. Co.**, Dept. AUP, 2503-05 Third Ave., New York 51, N. Y.

▲ For more details circle **NED-7 A4** on enclosed inquiry slip ▲

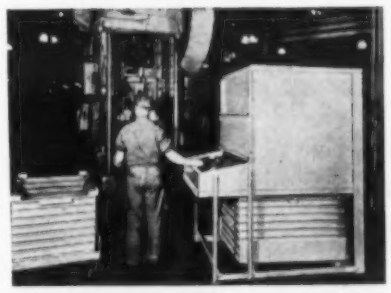
ADJUSTABLE PAWL FASTENERS
in three sizes and head styles



Designed for quarter-turn closure or opening of hinged doors and panels on machinery and equipment, Southco adjustable pawl fasteners are offered in large, medium and miniature sizes. The adjustable pawl unit tightens or loosens contact with the door jamb with an additional turn or two of the head. The fixed pawl type is preset at installation to the desired contact gap and tension. Knurled knob and T-bar heads provide convenient hand operation. Slotted flush head is available for screwdriver operation. Also offered is gasket for use in making fastener watertight if desired. Made by **South Chester Corp.**, Southco Div., 1413 Finance Bldg., Philadelphia 2, Pa.

▲ For more details circle **NED-8 A4** on enclosed inquiry slip ▲

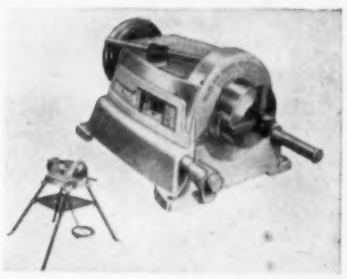
GRAVITY-FED HOPPER
for work level material storage



Contents of the 47.2-cu ft capacity Work-O-Matic hopper are gravity-fed at work level position for assembly, machining, processing and other operations. With a drop-bottom box stored under the hopper, total material supply volume at the work station is 67.4 cu ft. Hopper can be moved by fork lift truck for use in several locations. Same truck can dump contents of the box into the hopper from any direction. Front hopper legs are set back under the work level tray to permit close work positioning. An adjustable vertical gate governs material flow according to piece size. Made by **Union Metal Mfg. Co.**, Dept. NE, Canton 5, O.

▲ For more details circle **NED-9 A4** on enclosed inquiry slip ▲

PIPE TOOL DRIVE
for hand threaders and cutters



Hand pipe threaders, cutters and reamers are quickly converted to power tools with model 88 power drive which features capacity of ⅛ to 2-in. pipe, ¼ to 1½-in. bolts. With universal drive shafts, it handles geared die stocks and cutters up to 12-in. Features include three-jaw scroll chuck on front with six pinions; rear chuck with universal centering; ½-hp universal motor, forward and reverse, which operates on 110 v, 25 to 60 ac or dc; and sealed reducing gears. With one-piece aluminum housing, unit weighs 140 lb. It can be mounted on bench or service truck, or furnished with set of legs and tool tray as accessories. Made by **Toledo Pipe Threading Machine Co.**, Dept. NED, Toledo, O.

▲ For more details circle **NED-10 A4** on enclosed inquiry slip ▲

NEW! VALVAIR SPEED KING SOLENOID PILOT OPERATED CONTROL VALVES

The New Valvair Speed King line is complete — 3-way, 4-way, 4-way-5-port (2-pressure), foot-mounted or sub-base manifold mounted; pipe sizes — ¼", ⅜", ½", ¾", 1". A precedent-breaker in size, weight, speed and endurance. *Get all the facts!*

VALVAIR CORPORATION *Affiliate: Sinclair-Collins Valve Company* 947 BEARDSLEY AVE., AKRON 11, O.

REPRESENTATIVES IN PRINCIPAL CITIES

Rely Upon Valvair DIVERSATILITY

ASK FOR BULLETIN "N-1".

▲ For more details circle **NED-11 A4** on enclosed inquiry slip ▲

ENORMOUS SAVINGS IN COLOR DECORATION OF 3-DIMENSIONAL PARTS

ELECTRO-FORMED METAL SPRAY PAINTING MASKS

(Made by Patented Process)

Permit rapid wet painting, one color after another. Clean, sharply defined letters and decorative effects obtained on intricate die castings, stampings and plastic forms by accurate control of painted areas. No fogged edges. After-wiping or buffing-off of over-spray unnecessary. The "loose" inside of letters and numerals, such as "O" and "6", is held in position by arched bridging to eliminate objectionable "ties". Plug-type masks [keep depressed areas clear, while spraying background]; lip-type masks [protect background while painting depressed areas]; and block-cutout, plane-surface type masks.

Foot treadle air-operated clamps, fixtures and tools which position and hold the piece snugly in the mask; and permit the operator to use both hands.

We design, engineer and build automatic, entirely air-operated machines for spray decorating a variety of small parts at speeds of up to 3600 per hour. Masks inserted flush with top of work table. Spraying is from below. Dials regulate cycling speed and amount of paint sprayed. The same amount of paint is sprayed on every part, regardless of speed of loading cycle. Effect paint savings up to 50% over hand spraying. Employ automatic guns and air-agitated paint pressure tanks with insert containers.

AUTOMATIC, ROTARY-INDEXING PAINTING MACHINE

Completely air-operated or actuated by electric-motor Geneva drive. Machine illustrated has 24 work-holders and indexes 12 times per each complete revolution of the table. The part cavity is eight inches deep and the painting is accomplished on the return stroke, with the work being revolved by a variable-speed air drive.

Speed of stroke during painting regulated by convenient dial. Speed of indexing dial controlled to paint from 400 to 1200 pieces per hour, two at a time. Continuous, circulating paint system. Can be supplied with hot-spray equipment if desired. Built for 4-, 6-, 8-, 12- or 24-station indexes or continuous movement.

We also manufacture mask washing equipment.

CONFORMING MATRIX CORPORATION
338 Toledo Factories Bldg., Toledo 2, Ohio

Please send without obligation, details on [ ] Automatic Rotary Indexing Painting Machines; [ ] Automatic Single-Spindle Painting Machines; [ ] Hand Masks; [ ] Mechanical Masking Fixtures; [ ] Air-Operated Masking Fixtures; [ ] Stationary, Automatic Spray-Painting Masking Machines; [ ] Rotary Table, Automatic, Spray-Painting Masking Machines; [ ] Mask-Washing Equipment; [ ] Quotations on masks for parts [or prints] which I am forwarding.

NAME.....

FIRM.....

STREET.....

CITY & STATE.....

▲ For more details circle **NED-12 A4** on enclosed inquiry slip ▲

Spotlighting Plant Operation

Every industrial plant executive is concerned with some phase of plant operation or maintenance. These two functions can well account for a major portion of production costs in most industries. Over 400 companies will exhibit products which provide short-cuts to operating problems at the Fifth Plant Maintenance & Engineering show at Chicago's International Amphitheatre January 25 to 28, 1954.

On hand will be over 3000 experts to answer questions regarding the more than $3,000,000 worth of products and equipment that will be on display. In addition to the exhibits, there will be a three-day conference on industrial maintenance at the Hotel Conrad Hilton at which 57 nationally known authorities will lead discussions. We'll be there, too, and you'll be welcome at the NEW EQUIPMENT DIGEST booth. It's No. 536.

A. N. Gregg
EDITOR

INTERNAL COMPARATOR gages ⅜ to 6-in. inside diameters

Readily adjustable for measuring inside diameters from ⅜ to 6 in. with turn of a knob, Interapid internal comparator has meter type scale graduated in increments of 0.0005-in. Initial setting is with gage blocks, master gage rings or micrometers. Locking lever retracts arms for ease in inserting gage in work. Comparative reading shows instantly when holes are under, over or exact size. Counterbores as shallow as 1/16-in. can be checked. Set includes two sizes of centering arms which snap on and off readily. They are used to provide three-point contact on larger diameter bores. Made by **Portage Double Quick Tool Co.**, 1043 Sweitzer Ave., Akron, O.

▲ For more details circle **NED-13 A4** on enclosed inquiry slip ▲

DO YOU KNOW? Efficient planning of new laboratories or revamping of existing facilities are simplified with three-dimensional kit. It consists of 26 accurately scaled 3-D models of sectional metal lab furniture which is described in companion 28-page catalog. Also included are ruled layout sheets scaled ½-in. to the foot. Models are imprinted in detail and can be arranged as desired on the layout sheets. Kit is available free from Labline, Inc., 219 N. Desplaines St., Chicago 6, Ill.

▲ For more details circle **NED-14 A4** on enclosed inquiry slip ▲

LEVIN® MICRO-DRILL PRESS FOR VERY SMALL HOLES DOWN TO .002"

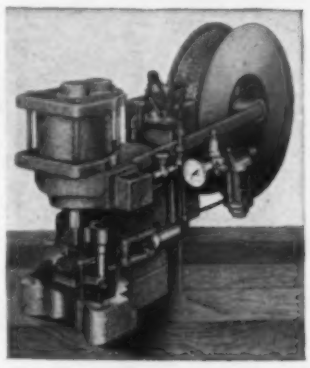
Designed to hold small drills in precision collets, thus overcoming the difficulty of making a drill run true as when held in a conventional drill chuck. Absence of a sliding quill guarantees maximum sensitivity with fingertip control. A mounted ⅛" capacity chuck can also be used.

Send for Catalog L describing Micro-Drill Press, full range of collet sizes, accessories and other precision tools

LOUIS LEVIN & SON, INC., 782 E. PICO BLVD., LOS ANGELES 21, CALIF.

▲ For more details circle **NED-15 A4** on enclosed inquiry slip ▲

FAST, COST-CUTTING TERMINAL ATTACHING on NEW "P-M" *advanced design*



COLD CRIMPING MACHINE

Advanced design of new P-M automatic terminal attaching machine provides many improvements that drastically reduce tool set-up time and production lag. Interchangeable rolling tools are quickly set up in special die-set fully accessible in machine, and removable for faster tool changing on bench. Extra die-sets keep tools set up for quick job change-over.

Using strip terminals in continuous form supplied on nonreturnable reels, the machine automatically crimps and cuts off in one operation to produce fast, efficient, economical terminations. Engineered for rugged, continuous operation. Requires minimum production space. Simple, quiet air pressure operation. Modern color scheme and design innovations promote operator acceptance and minimize operational fatigue.

Low priced for short or long runs, P-M machine is sold outright with set of rolling tools ready for operation. Illustrated catalog of standard strip terminals, with full specifications, available when requested on company letterhead.

PATTON-MacGUYER CO.
16 Virginia Avenue . . . Providence R. I.

▲ For more details circle **NED-16 A4** on enclosed inquiry slip ▲

Browning SPROCKETS

OFF-THE-SHELF READY-FOR-USE

A Time and Money Saver with

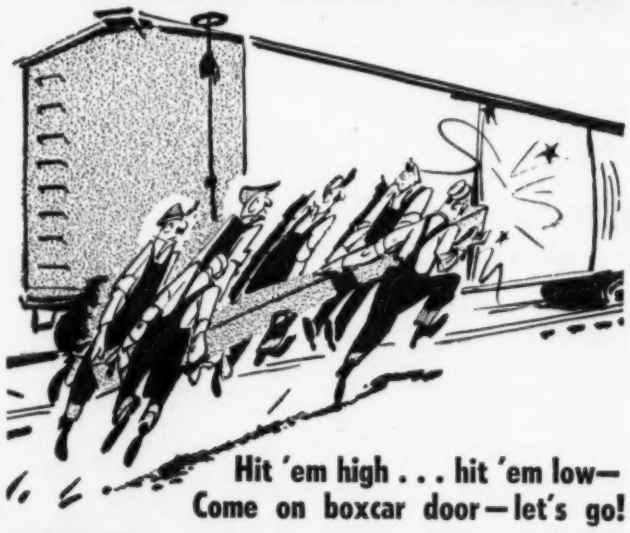
Split Taper Compression Bushings
• NO REBORING
• NO WELDING

Write for Catalog CD 101.

There's a Browning Distributor near you.

BROWNING MANUFACTURING COMPANY MAYSVILLE · · · KENTUCKY

▲ For more details circle **NED-17 A4** on enclosed inquiry slip ▲



Hit 'em high . . . hit 'em low— Come on boxcar door—let's go!

Why use 14th Century methods to open balky, hard-to-roll boxcar doors? Why endanger lives and limbs? Why waste labor, time and money? THE NOLAN ONE-MAN CAR DOOR OPENER OPENS ANY BOXCAR DOOR IN 20 SECONDS OR LESS! A few quick pulls on the anchor chain by one man and the door rolls open. The NOLAN saves its low initial cost in the first hour of operation.

NOLAN ONE-MAN CAR DOOR OPENER $37.50 F.O.B. Bowerston

Order one or more now!

Free Literature

THE NOLAN COMPANY 128 Pennsylvania St., Bowerston, Ohio

▲ For more details circle **NED-18 A4** on enclosed inquiry slip ▲

ANOTHER BONDACTOR APPLICATION

A BONDACTOR Will Do It BETTER

Concrete, refractories, other cementitious materials — BONDACTOR guns them all. Use this versatile machine for a recoating job in the morning — a waterproofing job in the afternoon. A BONDACTOR will save you time, money and manpower on countless day-in and day-out maintenance jobs. Many new construction applications, too.

THREE MODELS AVAILABLE

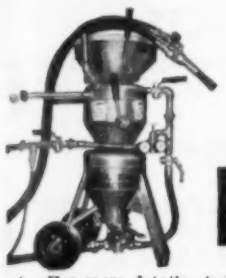
Model 750. Capacity: ½-¾ cu. yd. per hr. Operates with 75 or 105 CFM compressor.

Model 1250-S. Capacity: ¾-1½ cu. yds. per hr. Operates with 105 CFM compressor.

Model 1250-L. Capacity: 1½-3 cu. yds. per hr. Operates with 210 CFM compressor.

Capacities vary with material being gunned and with specific operating conditions.

All BONDACTORS can be operated from either plant or portable air compressors.



Write Today For Full Information
Please Indicate Intended Use

AIR PLACEMENT EQUIPMENT COMPANY
1008 W. 24th St. • Kansas City 8, Mo.

For more details circle NED-19 A4 on enclosed inquiry slip

Alloy Fabrication is our Baby!

YOU NAME IT . . . Any processing equipment—autoclaves, agitators, condensers, baskets, evaporators, kettles or stills. Small experimental models or full-scale production equipment. Any size or shape—metal or alloy including stainless steel, monel, Hastelloy etc.

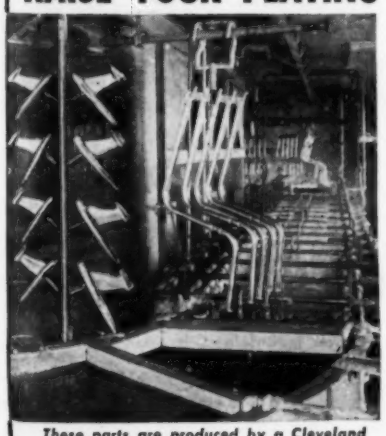
WE'LL MAKE IT! We'll follow your specifications . . . or help you develop them. Entirely new, unconventional equipment no problem. Tell us your requirements. We'll submit careful estimates without obligation. Write or wire for complete information to:

Emerson-Scheuring

TANK & MANUFACTURING CO., INC.
2071 Martindale Avenue • Indianapolis 7, Indiana

For more details circle NED-20 A4 on enclosed inquiry slip

RAISE YOUR PLATING PRODUCTION UP TO 60%



These parts are produced by a Cleveland Plating Company who testifies that they have increased their production 60%.

with the NEW SMOOTHEX BRIGHT COPPER PROCESS*

This revolutionary, new, high-speed process is your answer to an easier controlled, faster, more economical bright copper plating method in both large scale or average job shop production. Plating specialists developed the SMOOTHEX process to help you achieve top quality more profitable plating solutions capable of increasing your production 30 to 60 per cent by using your present equipment.

*Pat. Pend.

Use SMOOTHEX for maximum BRIGHTNESS • THROWING POWER • PLATING SPEED

SMOOTHEX provides an instant sparkling brilliance that occurs at the beginning of the plating cycle in a Rochelle Cyanide Copper Solution. It has exceptional speed of deposition and excellent throwing power. Brightness is achieved over a much greater range . . . from zero to eighty amperes per square foot. Ductile deposits and low copper concentrations are featured in this process. Periodic reverse or intermitting current may be applied to the SMOOTHEX process.

The SMOOTHEX PROCESS Is 98% Efficient

It eliminates copper buffing and saves nickel. A SMOOTHEX trial proves • Ease of Control • Instant Specular Brightness • Low Maintenance Cost • Low Operating Cost • Adaptability. A modern, well-equipped laboratory is at your service to convert other processes to SMOOTHEX. Send your sample solution for conversion information to . . .

SMOOTHEX, inc. 10707 BRIGGS ROAD CLEVELAND 11, OHIO

EXCELLENT TERRITORIES STILL AVAILABLE

For more details circle NED-21 A4 on enclosed inquiry slip

MACHINE OPERATION RECORDER records up to 72 hours continuously

Designed to provide an immediately visible continuous record of busy and idle time of plant machinery, model M recorder will cover a 72-hr period by three revolutions of standard 6-in. diameter 24-hr chart. Requiring only wire connections to the machine's motor, unit can be located at any desired point, and is also available with 12 and 8-hr charts. To prevent unauthorized tampering, chart shows whenever case was locked or unlocked. An elapsed timer or counter can be included if desired. Made by **Service Recorder Co.,** 1422 Euclid Ave., Cleveland 15, O.

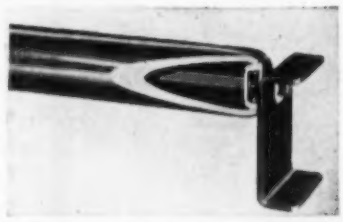
For more details circle NED-22 A4 on enclosed inquiry slip

UNIT HEATER motor mounting made more rigid

Construction improvement incorporated on certain sizes of the Utility unit heater, a horizontal discharge heater, and on the suspended, vertical discharge revolving unit heater combines motor mount with integral safety guard. Result is reportedly a more rigid type of motor mounting and more strength in the safety guard. Heaters made by **L. J. Wing Mfg. Co.,** 165 Vreeland Mills Rd., Linden, N. J.

For more details circle NED-23 A4 on enclosed inquiry slip

ROLLER CONVEYOR for heavy duty and impact loads



Choice of 154 straight section models and 38 curves is offered in 1.9 Series roller conveyor for permanent installation for heavy duty and impact loads. Series is made in 11 regular widths from 12 to 51 in. with choice of seven roller spacings from 2½ to 12 in. on centers. Capacity is 250 lb per roller, subject to frame capacity of 2750 lb. Rollers are of 9-gage steel and are fitted with ball bearings. Single and double lane curves are provided to match the straight sections, and both 45 and 90-degree models are reversible for left and right-hand turns. Stands are fully adjustable, cross-braced and pierced for lagging to floor. Made by **Rapids-Standard Co.,** Dept. VL, 342 Rapistan Bldg., Grand Rapids 2, Mich.

For more details circle NED-24 A4 on enclosed inquiry slip

It can lift 25 tons* up to 5 inches is only 10 inches high, weighs 38 lbs.

The "Mighty Mite" (No. 2510-C-2)
**other sizes handle 10 to 50 tons*

This precision made, ball-bearing journal jack is a favorite in industrial plants, construction and engineering companies, building movers, railroads and ship yards. The "Mighty Mite" is easy to carry, simple to operate, quickly raised and lowered, and is absolutely safe and dependable. It can be operated on any plane. A solid steel handle (1⅛" x 36") with pinch bar ends, which can be used as a pry bar, is furnished with each jack.

Call your distributor for complete details and information on prices and delivery or write the oldest and largest manufacturers of lifting jacks for bulletin AD12N. The Duff-Norton Manufacturing Co., P.O. Box 1889, Pittsburgh 30, Pa. Canadian plant—Toronto 6, Ontario.

DUFF-NORTON JACKS
"Giving Industry A Lift Since 1883"

For more details circle NED-25 A4 on enclosed inquiry slip

BE READY FOR *Every* CLEANING NEED

IDEAL BLO-R-VAC

Triple Value!

A "Tank-Type" Cleaner
A "Hand-Type" Cleaner
A Blower-Sprayer

All in One!

CONVERTS IN A JIFFY! . . . from a "tank-type" cleaner to a "hand-type" cleaner or blower.

Power-packed and with highest cleaning efficiency, IDEAL Blo-R-Vac speeds *all* your cleaning jobs! Low in first cost, it's actually *three rugged cleaners in one!* Vacuums lint, dirt, picks up water. Promotes scrap salvage — metal particles stay in big tank; lighter particles go into dust-tight bag. Power unit serves as a separate blower-sprayer or hand type cleaner. Full selection of attachments. 1⅓ or ⅔ H.P.

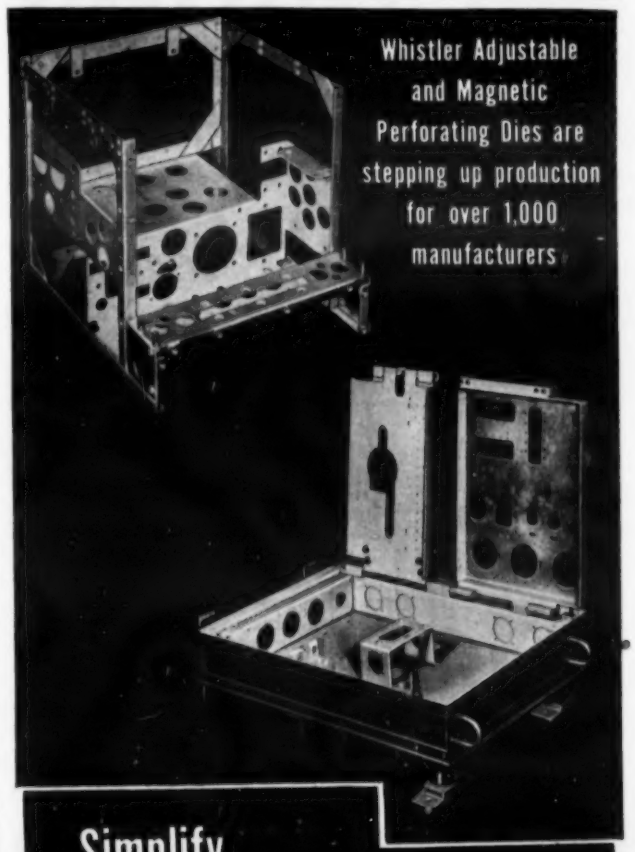
Sold Through America's Leading Distributors
Canadian Distributor: Irving Smith, Ltd., Montreal

TRY IT FREE!

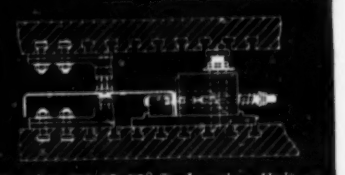
IDEAL INDUSTRIES, INC.
1032 Park Ave., Sycamore, Illinois
Arrange FREE DEMONSTRATION of your new BLO-R-VAC in our plant.

Name_____
Company_____
Address_____
City_____ Zone____ State____

For more details circle NED-26 A4 on enclosed inquiry slip



Simplify Complicated Piercing Operations



Use this HU-50 90° Perforating Unit on the same job with other Whistler Dies . . . often saves extra press operations.

USE WHISTLER Adjustable and Magnetic Dies for perforating, notching and slotting sheet metals . . . fast, accurate and cost cutting. Complicated patterns can be set up quickly. Hole arrangements can be changed in the press . . . without waiting and at no extra die cost. New HU-50 units, that pierce at 90° angle, can be used in conjunction with standard perforating equipment. Fewer press operations are necessary.

Re-use the same dies in different arrangements on many jobs. Punches and dies are interchangeable.

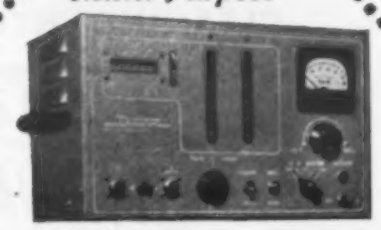
Whistler Adjustable Dies can be used in practically every type press. Standard sizes and shapes of punches and dies available up to 3 inches. Special sizes and shapes to order.

S. B. WHISTLER & SONS, INC.
750 Military Road
Buffalo 23, N. Y.

For prices and application data on this modern way to speed production and cut unit costs, write for these illustrated Whistler catalogs.

For more details circle NED-27 A4 on enclosed inquiry slip

Multi-Purpose



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Compact
Precise
Low-Cost

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POSITIVE or NEGATIVE PULSES – 2-100V Pos. 2-50V Neg.
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5420 VINELAND AVE., NO. HOLLYWOOD, CALIF.

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NEW! ALEXANDER *Multi-Flex*

LEATHER BACK-UP PADS
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Slash Sanding Costs!

For the first time . . . a *leather* back-up pad that is perfectly balanced for high speed operation (Patents Pending), and available in any degree of flexibility. Only leather provides the resilience to give such fast cutting action and such long life. Economical, too, because pad can be renewed by replacing the leather alone. Send for descriptive literature.

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406 N. 3rd Street Philadelphia 23, Pa.

The Back-Up Pad That Can Be Renewed by Replacing the Leather Alone

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Electric HEATING UNITS

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Write for "100 WAYS TO APPLY ELECTRIC HEAT"

It's filled with application ideas on versatile, low-cost Chromalox Heaters. Send for your copy now.

IB-17

Industrial Div., EDWIN L. WIEGAND CO., 7509 Thomas Boulevard, Pittsburgh 8, Pa.

See other ad. on pg. 75

CHROMALOX
ELECTRIC HEAT FOR MODERN INDUSTRY

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3, 5, 7½, 10 and 15½-ton capacities

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For more details circle NED-31 A4 on enclosed inquiry slip

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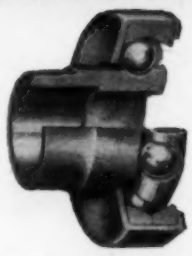

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New Speed Control Valve—for controlling operation of air and hydraulic cylinders.

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233 FREMONT STREET, HARRISON, N. Y.

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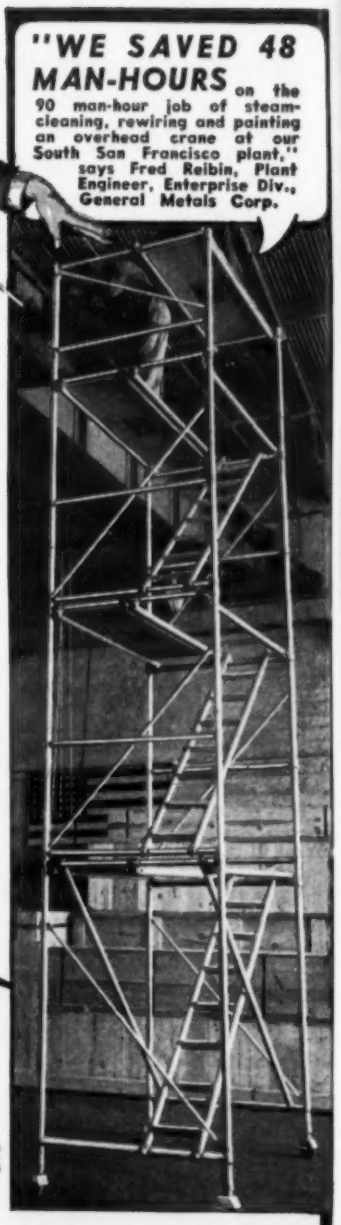
"WE SAVED 48 MAN-HOURS on the 90 man-hour job of steam-cleaning, rewiring and painting an overhead crane at our South San Francisco plant," says Fred Reibin, Plant Engineer, Enterprise Div., General Metals Corp.

25 ft.
"UP-RIGHT" SCAFFOLD-ON-WHEELS
Set up in only 5 minutes!



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Patented
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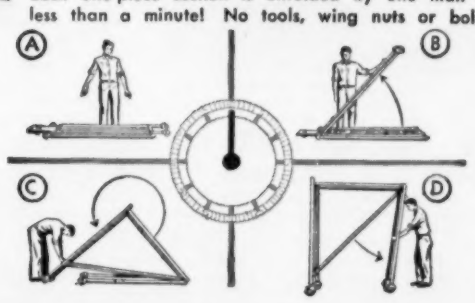

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Factories: Berkeley, Calif. and Teterboro, N. J.
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A-4

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COMPANY .....

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Principal Products Manufactured .....

..... Approx. Number of Employees in Plant .....

Check Invested Capital Rating of Your Company

- ☐ Over $1,000,000
- ☐ $500,000 to $1,000,000
- ☐ $200,000 to $500,000
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Delpark Filters for Paint Spray Booth Water

Now—through the use of Delpark industrial filters and automatic skimming, paint spray booth operation is more efficient. Hand-skimming, necessary with former methods, is eliminated. Fouled water spray jets and eliminators no longer interrupt spray booth operation. Clean-up labor and spray booth maintenance are reduced to a minimum.

Write today for information on the Delpark Paint Spray Booth Filter now in use in many large automotive plants.

INDUSTRIAL FILTRATION COMPANY
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Manifold equipped with five simultaneous, instantaneous-acting cylinders.

"Helping Hands" for Hundreds of Jobs!

Now . . . miniature pneumatic cylinders . . . smaller than your fingers, with power to do hundreds of activating, holding, control, or feeding jobs. In electrical or mechanical testing, assembly, control, holding or work feeding setups . . . operated automatically or by foot valves . . . they help you produce better products, faster at lower cost by supplying workers with extra fingers and hands!

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7390 Colerain Road, Cincinnati 24, Ohio
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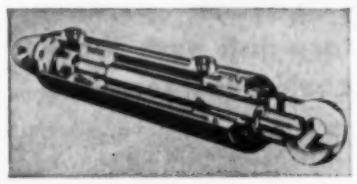
MOTOR DRIVE gives speed range up to 10:1

Of the full-wave magnetic amplifier type, Variamp motor drive provides adjustable direct-current motor speeds from an alternating current power source. Standard model provides for speed ratio up to 10:1 and is available with motors ranging from 1/40 through ½ hp. Self-contained units have on-off switch and speed adjusting rheostat. Optional features include jogging, dynamic braking and reversing. Load can be applied without warm-up period, and maintenance is minimized. Made by **Clark Controller Co.**, 1148 E. 152nd St., Cleveland 10, O.

▲ For more details circle NED-38 A4 on enclosed inquiry slip ▲

OIL HYDRAULIC CYLINDERS sizes up to 8-in. effective diameter



Line of standard double-acting oil hydraulic cylinders in sizes up to 8-in. effective diameter feature highly polished, chrome plated piston rods and honed tubes. Both piston and rod packing assemblies make use of chevron (V-type) packing. O-rings are used for static seals only. Wiper ring keeps dirt out of hydraulic system and protects packing. Made by **New York Air Brake Co.**, Hydreco Div., 1107 E. 222nd St., Cleveland 17, O.

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FORGED STEEL CASTERS in 5, 6 and 8-in. wheel sizes

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L-W Model SD 6½" Swing DIVIDING HEAD

Spindle Threaded 1½"-8 to fit L-W 5" Universal Chuck
• ACCURATE • RUGGED • 36 LB.
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Heavy duty headstock and tailstock designed for maximum rigidity. Alloy steel threaded headstock spindle with extra large tapered bearing and takeup adjustment collar. Head tilts to 90° in vertical position. Alloy stress-proof steel worm and accurately cut worm wheel cut to close limits for accuracy. Ball bearing thrust and adjustable for end play. Complete with three index plates for dividing all numbers to 50 and even numbers to 100, except 96T. Index chart shows all divisions obtainable to 380. Right or left hand models.

Model BP 11" Swing for plain milling machines. Shipping weight, 140 lbs. **$225.00**
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L-W CHUCK COMPANY 51 SO. ST. CLAIR ST. TOLEDO 4, OHIO

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City _____ Zone _____ State _____
☐ $15.00 Enclosed ☐ Bill me

▲ For more details circle NED-42 A4 on enclosed inquiry slip ▲

SIMPLER FLOW MEASUREMENT in the palm of your hand

NEW! MERCURY-LESS! FOXBORO DIFFERENTIAL PRESSURE CELL

Simplify troublesome flow problems . . . especially where corrosion is a factor or the use of mercury is objectionable. This unique flow measuring device — the Foxboro d/p Cell — reduces installation and operating costs, combines measurement and transmission in one simple, compact unit.

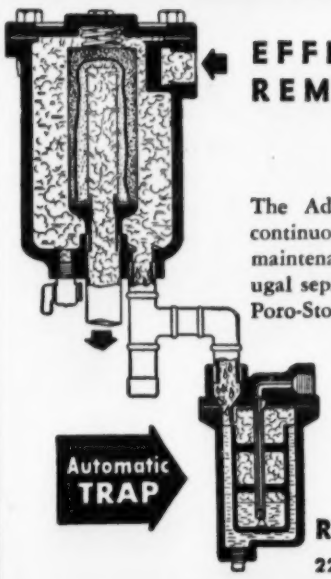
OUTSTANDING FEATURES
- *Uses no mercury*
- *Zero Displacement*
- *Easily calibrated*
- *Steel or Stainless Steel Construction*
- *Weighs only 20 pounds*
- *Ranges: 25" to 800" H_2O*

WRITE FOR BULLETIN 420. The Foxboro Company, 661 Neponset Avenue, Foxboro, Mass., U.S.A.

FOXBORO Reg. U.S. Pat. Off. ACCURATE FLOW MEASUREMENT

▲ For more details circle NED-43 A4 on enclosed inquiry slip ▲

Poro-Stone Filtration FOR COMPRESSED AIR



EFFICIENTLY REMOVES:
OIL, WATER PIPE SCALE

The Adams *Poro-Stone* Filter gives continuous service without attention or maintenance expense. Efficient centrifugal separation *plus* diffusion through Poro-Stone, removes contamination completely without pressure loss. Automatic Trap eliminates attention and assures continuous and efficient filter operation. Write for complete data—Bulletin 177.

R. P. ADAMS CO., INC.
227 E. Park Dr., Buffalo 17, N. Y.

ADAMS *Poro-Stone* AIR FILTER

▲ For more details circle NED-44 A4 on enclosed inquiry slip ▲

What do you know about the *Moly-sulfide* LUBRICANT?

A LITTLE DOES A LOT

You may have heard about a highly successful solid-film lubricant which is giving remarkable results in the shop and in the field.

In one 40-page booklet we have collected 154 detailed case-histories describing how difficult lubrication problems have been overcome by molybdenum sulfide. If you wish to be up to date about this solid-film lubricant, write for a free copy now.

THE LUBRICANT OF MANY USES

Moly-sulfide
A LITTLE DOES A LOT

SEND FOR THIS FREE BOOKLET TODAY

Climax Molybdenum Company
500 Fifth Avenue · New York City 36 · N.Y.

▲ For more details circle NED-61 A4 on enclosed inquiry slip ▲

Are You Looking For A Valve to Stand Services Like These?

Then Write to

ROCKWELL!

Take a quick look at these services:

ACETIC ACID	LINSEED OIL
ALCOHOL	LYE
AMMONIA	NAPHTHALENE
BEER	PHENOL
BUTANE	SODIUM CHLORIDE
CARBON DIOXIDE	STYRENE
FREON	SULPHURIC ACID
GAS	TAR
GLYCERINE	VEGETABLE OILS
LACQUER	WATER

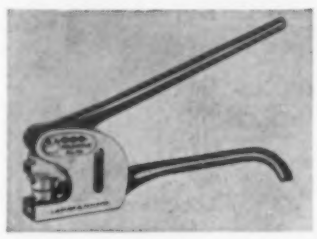
These and dozens of other industrial services are readily controlled by Rockwell-Nordstrom lubricant-sealed valves. These valves use lubricant, not only for easier turning and longer life free from abrasion, but also as a leak-proof seal. Write for catalog with service recommendations. All sizes, for any piping arrangement, iron, steel and corrosion-resistant alloys.

ROCKWELL MANUFACTURING COMPANY 5431 B
Pittsburgh 8, Pa.
Please send me Rockwell-Nordstrom Valve Catalog V-217
Name _____ Title _____
Company _____
Street _____
City _____ Zone ____ State _____

Canadian Licensee: Peacock Brothers Limited

▲ For more details circle NED-62 A4 on enclosed inquiry slip ▲

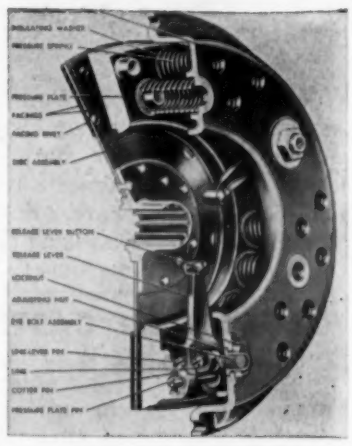
LAP WELDING TOOL
joins aluminum sheet without heat



Hand-operated model KL-10 Koldwelding tool is capable of lap welding aluminum foil or sheet without the application of heat, electricity, chemical or flux. After initial preparation or cleaning with wire brush, aluminum sheets, shaped extrusions or strips are joined readily by pressing the surfaces of the parts together between specially designed dies in this tool. Tool will also Koldweld aluminum and electrical copper in thicknesses of 0.001-0.040-in. or an overall thickness to 0.08-in. Each thickness of material requires a different size interchangeable die. Strength of joint is reported to be greater than that of surrounding material. Purchase price of tool, which includes license for use and one pair of dies, is $280. Made by **Utica Drop Forge & Tool Corp.**, 2500 Whitesboro St., Utica 4, N. Y.

▲ For more details circle NED-63 A4 on enclosed inquiry slip ▲

DIRECT PRESSURE CLUTCH
nonadjustable dry-disk push type designed for continuous service



Heavy - duty, nonadjustable DP (direct pressure) clutch which has broad interchangeability with other DP clutches in the field combines high torque capacities, a minimum of parts, low release loads and positive engagement. Clutch has dry-disk push-type construction and will meet around-the-clock service requirements. Regular automotive clutch pedal adjustments are applicable to maintain proper clearance between release bearing and release levers. Located on top and along side walls of clutch cover are 33 ventilating holes which allow circulation of air to reduce thermal effects of friction heat.

Single plate sizes range from 12 through 15 in., plus a 17-in. size, and double plate models are made in 14 and 15-in. sizes. These sizes will supply ample torque capacities for engines developing 200 to 1400 lb-ft of torque. Various models will accommodate standard flywheels or bell housings, and conventional driven member assemblies with commercial facing materials and spline sizes are available. Made by **Lipe-Rollway Corp.**, 712 Emerson Ave., Syracuse 1, N. Y.

▲ For more details circle NED-64 A4 on enclosed inquiry slip ▲

CLEANS METAL PARTS
BETTER • FASTER • CHEAPER

NEW LOW COST BENCH MODEL **JET BLAST**

BENCH MODEL JET BLAST
Other sizes are available

SAVES UP TO 60% IN LABOR COSTS

JET BLAST REMOVES Rust, scale and Foreign Deposits from Dies, Molds, Tools or other precision articles without dimensional alterations. Increases adherance and bonding qualities of paint, porcelain, rubber, electroplated metals and a host of other materials . . . Equally effective for cleaning threads for close, smooth fit.

JET BLAST will give any desired finish on flat or irregularly shaped objects . . . Sharp edges are retained.

JET BLAST is excellent for light burring on hard to-get-at surfaces.

JET BLAST materially increases tool life when used for honing cutting faces after grinding . . . Eliminates costly hand labor.

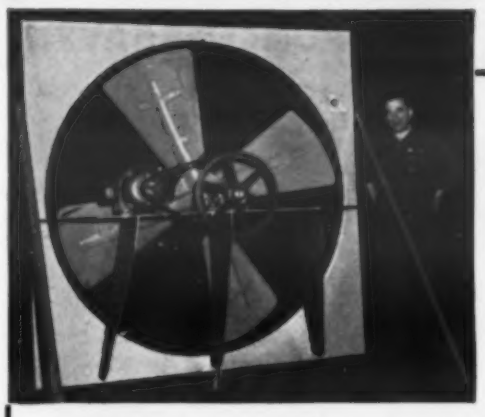
JET BLAST IS A TOOL ROOM NECESSITY

SEND FOR BULLETIN

DISTRIBUTORS:
A few territories are still open.

R·W·RENTON and Company
877 ADDISON ROAD • CLEVELAND 3, OHIO

▲ For more details circle NED-65 A4 on enclosed inquiry slip ▲



"Buffalo" 72" NV Heavy-Duty Breezo Fan

NOW! Propeller Fan Economy On More Jobs Than Ever!

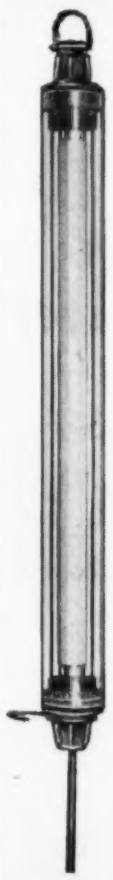
24" to 84" sizes! 4,000 to 90,000 cfm capacities! Free air delivery or duct-connected for static pressures up to 1"! Models for high and low temperatures, explosive and/or corrosive atmospheres! You'll save money on many an air job formerly requiring a more expensive fan, using these sturdily built square-paneled fans that are so easy to install. Quiet, efficient, practically attention-free. Four blades, die-stamped of heavy-gauge steel. A lifetime unit. WRITE NOW for Bulletins 3865 and F3790!

BUFFALO FORGE COMPANY
215 MORTIMER ST. BUFFALO, NEW YORK
PUBLISHERS OF "FAN ENGINEERING" HANDBOOK
Canadian Blower & Forge Co., Ltd., Kitchener, Ont.
Sales Representatives in all Principal Cities

▲ For more details circle NED-66 A4 on enclosed inquiry slip ▲

To Light up Confined Working Areas!

Where usual light sources are inadequate



DAY-RAY
VAPOR & MOISTURE TIGHT
INSPECTION LIGHTS

- Portable
- Light Weight
- Small Diameter
- Cool Soft Light
- Vapor Tight
- Withstands Vibration
- Easy to Relamp
- Quality Materials
- Perfectly Insulated

Approved by many safety engineers for use in hazardous locations

AVAILABLE IN 4 SIZES
30 watt • 15 watt • 8 watt • 6 watt
Also available with 18" handles

For Specifications and Prices, Write

DAY-RAY PRODUCTS, INC.
1133 MISSION STREET, DEPT. A
SOUTH PASADENA, CALIF.

▲ For more details circle NED-67 A4 on enclosed inquiry slip ▲

Headquarters for

ALMCO Supersheen SPEED FINISHING ALBERT LEA, MINN.

BARREL FINISHING COMPOUNDS

40 different scientifically combined compounds. With the huge selection you can choose the specific compound which will provide optimum results on a given job. Also, special custom made compounds. WHAT IS YOUR FINISHING PROBLEM? Write.

FREE CATALOG
52 pages of money-saving facts, figures. "Before and after photos". The latest on equipment, compounds.

ALMCO Supersheen
AMERICA'S LARGEST MANUFACTURER OF ADVANCED BARREL FINISHING EQUIPMENT—MATERIALS AND COMPOUNDS
ALBERT LEA, MINNESOTA

▲ For more details circle NED-68 A4 on enclosed inquiry slip ▲

FORMULA 602 VS. CARBON TETRACHLORIDE

(report by independent test laboratory)

FORMULA 602
Ten healthy adult albino rats inhaled 125 parts FORMULA 602 per million parts air in an inhalation box for 30 minutes. This was repeated daily for 14 days. At the end of this time ABSOLUTELY NO ILL EFFECTS OR DEATHS OCCURRED!

CARBON TETRACHLORIDE
After 30 minutes exposure to 125 parts carbon tet per million parts air in an inhalation box, seven out of ten rats died. The following day, the remaining 3 rats died after another 30 minutes exposure. CARBON TET KILLED ALL THE RATS!

FORMULA 602 CLEANS MOTORS AND ALL ELECTRICAL EQUIPMENT

FORMULA 602 cleans without leaving a residue, corroding metals or damaging electric insulation. Use it wherever carbon tet is used for cleaning!

SEND FOR FULL INFORMATION TODAY

the PENETONE co.

BOX ND-154 TENAFLY, NEW JERSEY

▲ For more details circle **NED-69 A4** on enclosed inquiry slip ▲

now- MEASURE, CONTROL LIQUID DENSITY

continuously and automatically with the

PRINCO
Since 1910

Densitrol

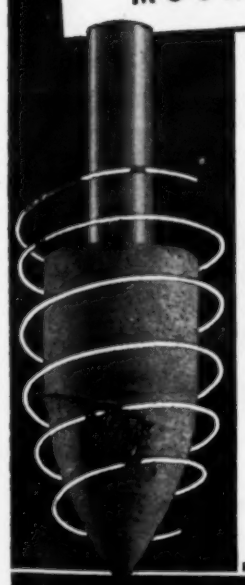
Process industries will welcome the new DENSITROL—the precision instrument that gives a continuous reading of density in flowing liquids such as sugar syrups, brine, acids. DENSITROL electrical indicators or recorders can be located remote from the sampling chamber itself. If desired, DENSITROL can be linked with control mechanisms for automatic regulation. For information on temperature and pressure ranges, calibrations, and other specifics, request Bulletin W-3.

PRECISION
THERMOMETER & INSTRUMENT CO.
1434 Brandywine Street, Philadelphia 30, Pa.

Makers of precision-built thermometers, barometers, hydrometers, gauges, indicators, mercury in glass thermo-regulators.

▲ For more details circle **NED-70 A4** on enclosed inquiry slip ▲

NEW! EXTRA DURABLE NU-TEX MOUNTED POINTS



speed up finishing
. . . cut costs

FASTER Designed to grind, polish and deburr all types of metals and plastics in one simple operation. Soft, cushion-like action produces even, extremely smooth finished surfaces quickly and easily . . . eliminates filing, scraping, sanding or burnishing.

LONGER LASTING Bonded together with a special resin under an exclusive manufacturing process for extra durability. Last longer under continuous operation . . . eliminate clogging or loading, even on softer metals.

PROMPT DELIVERIES Eliminate costly shipping delays. Choose from a complete line of Nu-Tex Mounted Points in all popular grit sizes . . . get prompt service on every order. Write for details. Atlantic Abrasive Corp. 504 Pearl Street, South Braintree 85, Mass.

Good Points To Remember

ATLANTIC ABRASIVE CORP.
South Braintree 85, Massachusetts

▲ For more details circle **NED-71 A4** on enclosed inquiry slip ▲

SEMIAUTOMATIC BENDER for finned or plain metal tubing

Bends varying from ¾-in. to 2-ft radius can be made in finned or plain ferrous and nonferrous tubing up to 40 ft long by a semi-automatic hydraulic powered bending machine. It bends tubing up to 1½ in. diameter around a cone-shaped steel die that is adjustable both vertically and horizontally to provide bending radii in infinitely variable increments. Larger radii up to 2 ft are attained by nesting hardwood cones of larger sizes over the conical steel die. Machine has a bending table powered by a high torque single-vane, one-revolution hydraulic motor. It has a welded steel base. Made by **Walter P. Hill, Inc.**, Dept. 1, 22183 Telegraph Rd., Detroit 19, Mich.

▲ For more details circle **NED-72 A4** on enclosed inquiry slip ▲

INDICATING THREAD GAGES roller thread pitch diameter and dial thread plug types comprise line

Line of indicating thread gages designed for quick inspection by unskilled operators includes a roller thread pitch diameter comparator gage, illustrated, and a dial thread plug gage for checking internal threads. Former has indicator gage reading in 0.0001-in. increments and is set by master thread gage. Not only "go" and "no go" tolerances are determined, but thread's position within the tolerance field, detecting the right time when a threading tool must be renewed, and sorting the work into classes of accuracy are indicated. Out-of-round errors are easily discovered by turning work between measuring rollers. Range is up to 2-in. thread diameter.

The dial thread plug gage measures internal threads by means of three interchangeable measuring jaws, of which the middle one is retractable between the other two. Two fixed lower jaws center instrument on threaded bore, whereas upper movable jaw transfers its movement to indicator. Three sizes measure diameters of 3/16 to 1 in., 1 1/16 to 2 1/16 in. and 2⅛ to 4¾ in. Both gages can also be used for checking smooth cylindrical work and smooth bores, respectively, with special measuring rollers and measuring jaws. Made by **George Scherr Co.**, Dept. NED, 200 Lafayette St., New York 12, N. Y.

▲ For more details circle **NED-73 A4** on enclosed inquiry slip ▲

MAYCO "Clear Vue" DESK ORGANIZER

- Promotes modern desk efficiency for correspondence, files, folders, catalogs, etc.
- Open unobstructed dividers provide a "Clear Vue."
- Index strip labels each compartment for rapid accessibility. Not a dust catcher! No muss—no fuss.

$4.75
Denver and West $5.00

Size 10" long, 8" wide, 9½" high, 9 sections.

No. 626 B Brown Hammertone
No. 626 G Gray Hammertone } HEAVY METAL CONSTRUCTION

Order from Your Stationer or write us direct

MAYER MANUFACTURING CORP.
3140 W. 51st Street Chicago 32, Illinois

▲ For more details circle **NED-74 A4** on enclosed inquiry slip ▲

WEBB TOWVEYOR*

for FASTER, SAFER & EASIER MATERIALS HANDLING

FASTER travel from loading to unloading stations—trucks are delivered to proper destination without wasted traveling time.

EASIER handling—trucks engage Towveyor chain by lowering tow pin and are disengaged at any point by raising of tow pin.

SAFER floors—Towveyor eliminates overhead chains and supports and employees can safely walk or truck over any portion of the system.

Cut your costs with a Towveyor system that will efficiently speed up your materials handling.

*Towveyor is a registered trademark identifying floor truck conveyors patented, manufactured and installed by the Jervis B. Webb Company.

JERVIS B. WEBB CO.
Conveyor Engineers and Manufacturers
8921 ALPINE AVE. • DETROIT 4, MICH.
OFFICES IN PRINCIPAL CITIES

▲ For more details circle **NED-75 A4** on enclosed inquiry slip ▲

PREVENT BURNS!

NEW! ADJUSTABLE swivelier COOLITES*

. . . STAY COOL
Using 100-watt lamp

"NEVER GETS TOO HOT TO HANDLE"

AT LAST!
Adjustable incandescent lighting units with metal shades that remain comfortable to the touch even after long hours of use with 100-watt lamp.

Ideal for use on lathes, millers, drill presses and other machine tools; on assembly benches and inspection tables, desks, drafting boards and business machines.

"Stays Put . . . At Any Angle!"

"SPOT THE LIGHT WHERE YOU WANT IT . . .

LIGHT THE SPOT WHERE YOU NEED IT."

• **ALL WIRES ENCLOSED**

TRADEMARK

For full information on Coolites, Fluorescent and Incandescent "Dextra-Lites" and other fine Swivelier industrial lighting units—

Write Dept. NE1 for Bulletin 134.

SWIVELIER COMPANY, Inc.
43-34th St., Brooklyn 32, N. Y.
Showroom: 30 Irving Place, New York, N. Y.

▲ For more details circle **NED-76 A4** on enclosed inquiry slip ▲

DUPOR No. 46

U.S.B. of M. APPROVED RESPIRATOR FOR TYPE "A" AND LEAD DUSTS

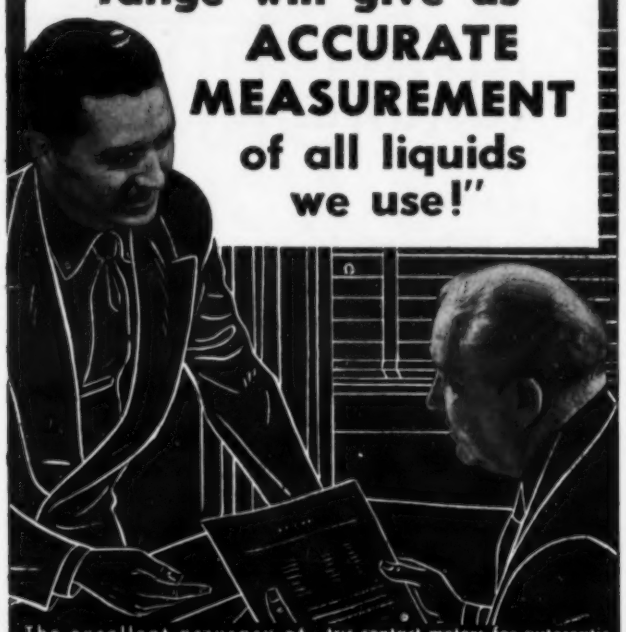
More than 46 sq. in. filtration area. Soft rubber face mask. U.S.B. of M. Approval BM-2124 for LEAD Dusts and ALL other toxic or poisonous dusts as well as Type A (Pneumoconiosis or Silicosis producing dusts). Unit has exclusive controlled breathing valves to guard against stale air. Maximum visibility—no interference with goggles or glasses.

Sample sent $3.25 pp

H. S. COVER
South Bend, Ind.

▲ For more details circle NED-77 A4 on enclosed inquiry slip ▲

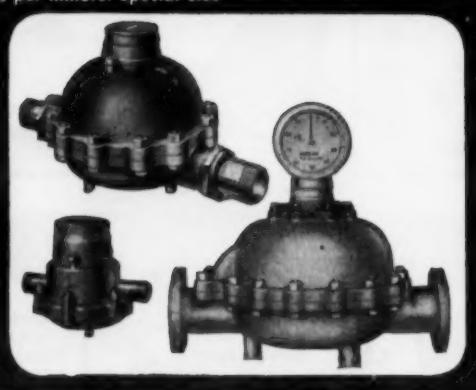
"I suggest NIAGARA METERS. Their wide range will give us ACCURATE MEASUREMENT of all liquids we use!"



The excellent accuracy of NIAGARA METERS minimizes waste and losses in the measurement of chemicals, solvents, oils, hot water, cold water, syrups and other liquids. Nearly all volumes and types are handled, from 1/30 to 1000 gallons per minute. Special electric contact meters for automatic batch metering. Stainless steel meters for corrosive liquids.

Be sure you know all the advantages of NIAGARA METERS

Send in the Data Request blank below — today.



BUFFALO METER CO. 2903 MAIN STREET BUFFALO, N.Y.

Gentlemen:
Please send me complete information on the use of economical NIAGARA METERS, based on the data below:

Liquid _____ Pressure _____ p.s.i.
Temp. _____ F.
Flow rate _____ g.p.m.
Maximum batch _____ gals.
Name _____ Title _____
Company _____
Address _____

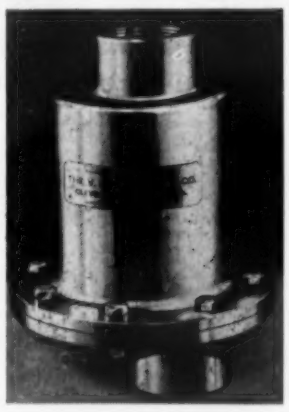
▲ For more details circle NED-78 A4 on enclosed inquiry slip ▲

FORK LIFT TRUCK
right-angle stacks in 5-ft aisles

Fork lift truck will stack tote boxes at right angles in aisles only 5-ft wide and has an elevated height of 127 in. It has a single offset drive and steering wheel, compensated by a free-swiveling caster on the other side of the truck. It is of stand-up rider construction, is capable of handling from 1 to 2-ton loads and is battery powered. Made by **Raymond Corp.**, 41118 Madison St., Greene, N. Y.

▲ For more details circle NED-79 A4 on enclosed inquiry slip ▲

STAINLESS STEEL TRAP
drains corrosive liquids from lines



Stainless steel float trap is designed for draining corrosive liquids from air, gas and steam confined in piping systems and equipment. It operates continuously without permitting air or gas to escape from the system by use of an interlocked valve, seat lever and ball float system. It is designed for service up to 300 psi and 800° F and is made in sizes from ½ to 2 in. Made by **V. D. Anderson Co.**, Dept. S, 1932 W. 96th St., Cleveland 2, O.

▲ For more details circle NED-80 A4 on enclosed inquiry slip ▲

DRAFTING CHAIR
height is instantly adjustable

Instant adjustment of height for maximum convenience and comfort is possible with the Adjustrite drafting chair without user getting up and without soiling of hands. Three seat height ranges are offered from 22 to 28 in., 24 to 32 in. and 28 to 36 in. Seat and posture type back rest are upholstered in U. S. Rubber Naugahyde in choice of green, gray, black, brown or red. The 2-in. thick seat pad is two-ply Nukraft rubberized hair and ½-in. foam rubber. Made by **Ajusto Equipment Co.**, Dept. D, 2144 Madison Ave., Toledo 2, O.

▲ For more details circle NED-81 A4 on enclosed inquiry slip ▲

BUSCHMAN

PORTABLE PRESS-TENDER

- PRESS TO PRESS
- PRESS TO TOTE BOX
- PRESS TO CONVEYOR

Featuring fast one-man positioning and adjustment, the BUSCHMAN powered belt Press-Tender eliminates costly manual handling . . . adds profits to press room operation.

Operating angles of the Press-Tender are variable from 13° to 48° and working heights are adjustable both front and rear. Adequate capacity for any press is assured by belt speed of 72 feet per minute.

Durable in construction and stable in design, the BUSCHMAN Press-Tender is available in models and sizes for use with any size or type of press.

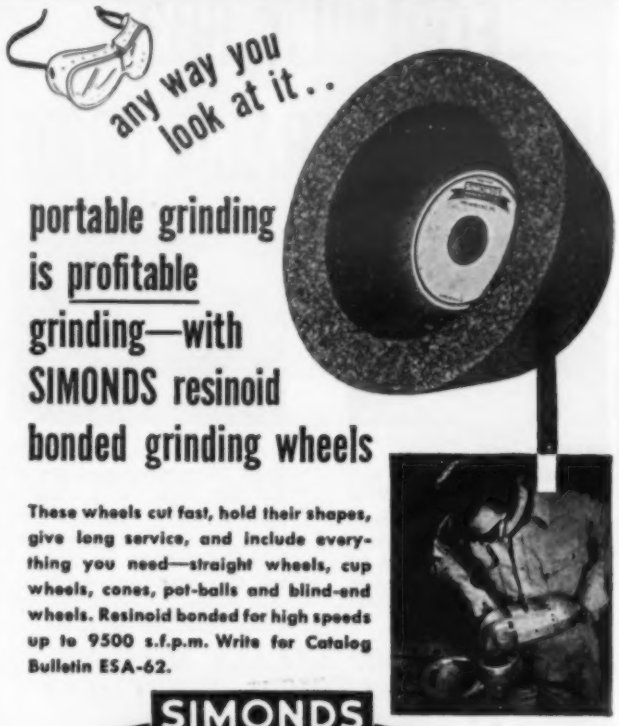
C-1706-EWB

PRODUCE MORE . . . FOR LESS
Buschman Conveyors

For complete specifications, send today for Bulletin B150.

THE E. W. BUSCHMAN CO.
4482 Clifton Ave. • Cincinnati 32, Ohio

▲ For more details circle NED-82 A4 on enclosed inquiry slip ▲



portable grinding is profitable grinding—with SIMONDS resinoid bonded grinding wheels

These wheels cut fast, hold their shapes, give long service, and include everything you need—straight wheels, cup wheels, cones, pot-balls and blind-end wheels. Resinoid bonded for high speeds up to 9500 s.f.p.m. Write for Catalog Bulletin ESA-62.

SIMONDS ABRASIVE CO.
PHILADELPHIA 37, PA.
Division of Simonds Saw and Steel Company
DISTRIBUTORS IN PRINCIPAL CITIES
BRANCH WAREHOUSES: Boston, Detroit, Chicago, Portland, San Francisco

▲ For more details circle NED-83 A4 on enclosed inquiry slip ▲

TWO PRESSES for the PRICE OF ONE . . .

A DEEP DRAW PRESS — A PRESS BRAKE

This 100 ton PACIFIC HYDRAULIC PRESS BRAKE is unique as a draw press because it provides a maximum of accessible working space without corner strain rods. It also can be easily converted to a press brake in less than ten minutes by removing the upper platens. As a press brake, it incorporates all of the advantages of "The Pacific" — the first really safe brake. It can't be jammed — the stroke is infinitely adjustable from ⅛" to 10" with full tonnage available throughout the stroke — It accurately straightens and air bends — It is designed for heavy punching and blanking at any point along the bed.

PACIFIC HYDRAULIC PRESS BRAKES have proved themselves by years of daily operation throughout the World.

Sales and service available in all major cities of the United States. Call us for assistance in supplying a machine to fit your special needs.

PACIFIC INDUSTRIAL MFG. CO.
848 - 49th Avenue - Oakland, Calif.

▲ For more details circle NED-84 A4 on enclosed inquiry slip ▲

The fact that all the horsepower goes through the coupling emphasizes the importance of protecting direct-connected machines against misalignment.

AJAX FLEXIBLE COUPLING CO. INC., WESTFIELD, N. Y.

▲ For more details circle NED-85 A4 on enclosed inquiry slip ▲

PALMER

MERCURY ACTUATED

DIAL THERMOMETERS

in 3 types to suit any requirements

Full 4½" dial face. Stem can be placed at any angle and case can be rotated to any readable position.

1 **Rigid Stem Dial Thermometer** tapered bulb, interchangeable with standard industrial thermometer separable socket. (As illustrated above.)

2 **Wall Mounted Dial Thermometer** with flexible connecting armor. Case adjustable to easy reading position.

3 **Flush Mounted Dial Thermometer** for panel mounting with flexible connecting armor.

All three types have a full 4½" dial face.

PATENTED

for accuracy: Mercury actuated . . . Fully Compensated by Invar Compensation. Guaranteed Accurate 1 scale division.

for angularity: Can be adjusted to most readable position at any angle desired.

for readability: Bold Black Numbers . . . 11" of scale Reading Dial face can always be placed in easiest readable position.

for interchangeability: Always specify "PALMER" Separable sockets as they are interchangeable for Dial or Industrial type Thermometers.

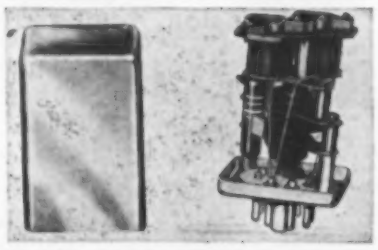
Send for Bulletin 51-129 for details on the New Palmer Dial Thermometer.

PALMER THERMOMETERS, INC., Cincinnati 12, Ohio

Mfrs. of Industrial Laboratory Recording and Dial Thermometers

▲ For more details circle **NED-86 A4** on enclosed inquiry slip ▲

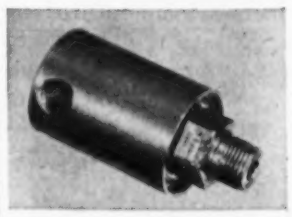
OSCILLATOR CONTROLS provide stable output frequencies



Use of Frahm oscillator controls in electronic oscillators makes it possible to obtain good sine wave signals with output better than 1 v. Actually miniature tuning forks for use in electronic oscillators to provide stable output frequencies, they are available for any frequency in range of 50 to 1000 cps with accuracies of 0.1-per cent. Series of standard units is offered to match standard Frahm reed relays (*NED Aug. '52*). Made by **James G. Biddle Co.,** Dept. 34-23, 1316 Arch St., Philadelphia 7, Pa.

▲ For more details circle **NED-89 A4** on enclosed inquiry slip ▲

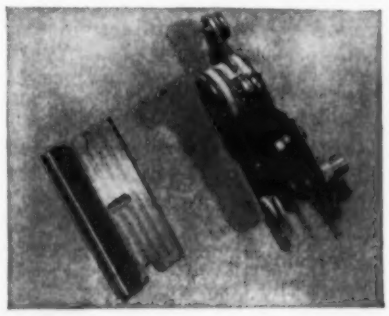
REVOLVING JOINT for air and hydraulic lines



Intended for normal temperature applications on air and hydraulic pressures, this high speed revolving joint is usable on air and hydraulic brake and clutch applications. Joint consists of only seven parts and contains a high speed lubricated-for-life bearing. It is made in both ⅛ and ¼-in. straight threads and has small dimensions and low turning torque. Rotating seal is nonporous heat treated carbon, and stationary seal is a standard oil-resistant O-ring. Made by **Rotherm Engineering Co.,** 7280 W. Devon Ave., Chicago 31, Ill.

▲ For more details circle **NED-90 A4** on enclosed inquiry slip ▲

MANUAL-RESET THERMOSTAT calibrations up to 550° F offered

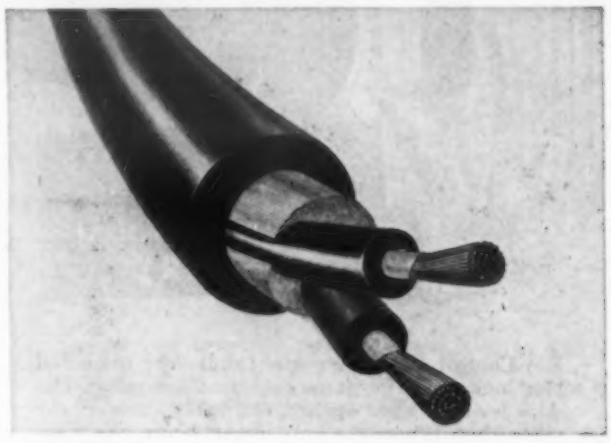


Improved manual-reset thermostat is designed primarily as a high limit cut-out that instantaneously snaps off at a predetermined temperature. It will not remake until the reset button is pushed. Quick thermal response makes it suitable for air conditioners, room heaters, coffee makers and other devices calling for high temperature protection. Alternating and direct current ratings in any calibration up to 550° F are available. Made by **Westinghouse Electric Corp.,** P. O. Box 2099, Pittsburgh 30, Pa.

▲ For more details circle **NED-91 A4** on enclosed inquiry slip ▲

PORTABLE CORD

Neoprene-jacketed Securityflex takes abuse, won't kink, flexes indefinitely



Securityflex* is available as a heavy duty portable cord of one to six conductors, or as a lightweight cord for small tools and lamps. Tough, dense neoprene jacket resists flame, heat, sunlight, aging, ozone, oils, solvents, chemicals and acids . . . protects against cutting, abrasion and crushing. It's so rugged it's used on mine drills! Securityflex delivers safe, adequate power . . . stands up under the toughest conditions. *Anaconda Wire & Cable Company, 25 Broadway, New York 4, N. Y.*

*Trademark

ANACONDA® today's headquarters for wire and cable

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Cut Your Fastening Costs • Save Time

Send for FREE Test Pins

Specify Type Length and Diameter

Three Grooves expand the Gillen Pin. When inserted into drilled hole, grooves compress, making solid, shock-proof contact around entire diameter of hole and pin. The assembly is Fast, Easy, Positive. The assembled appearance is neat. Available from stock in many lengths and diameters. Write for complete information and prices. Know about this Lower Cost fastening method.

No Threading • Tapering • Reaming

Write to: **John Gillen Company** INC.

Makers of all types of Keying and Planing Devices

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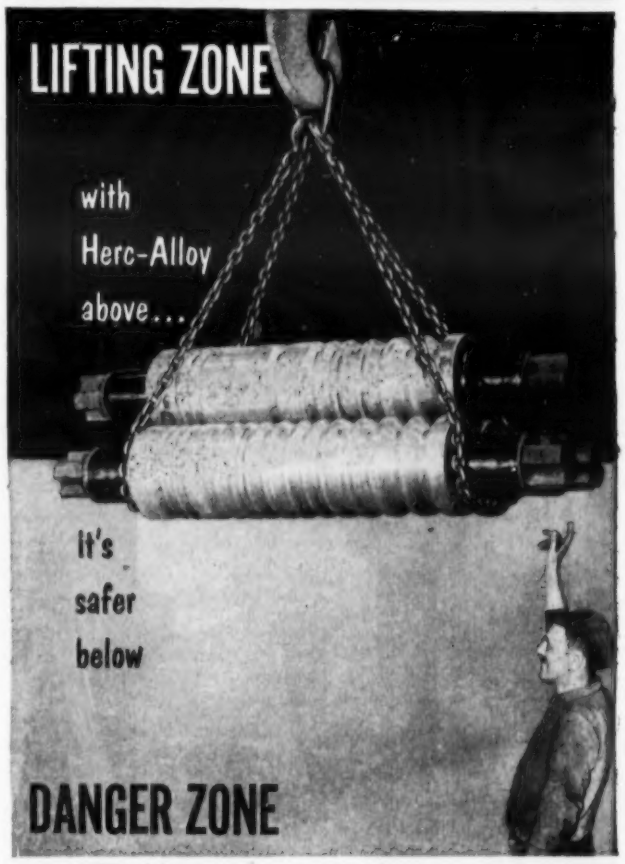

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SLING CHAINS

Write for Data Book

The Allegheny Ludlum Steel Corp., pictured above, uses Herc-Alloy Sling Chains for hundreds of tough lifting jobs in its plants. In addition to maximum safety, Allegheny Ludlum also enjoys the extra economy of longer-lasting Herc-Alloy. These sling chains offer still another advantage...a weight reduction unmatched by any other alloy chain without any sacrifice in tensile strength. This reduces worker fatigue. All things considered, don't you think Herc-Alloy Sling Chains are worth a try in your plant.

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DISTRICT OFFICES: NEW YORK, CHICAGO, CLEVELAND

In Canada: McKINNON COLUMBUS CHAIN LIMITED, ST. CATHARINES, ONT.

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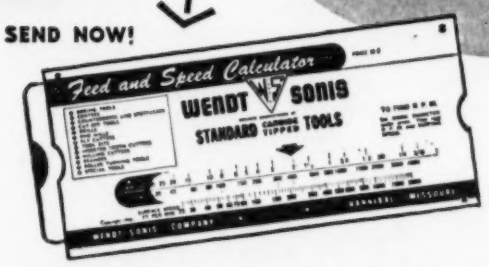

Send for this Wendt-Sonis Feed and Speed Calculator for all carbide cutting tools. It's FREE . . . without obligation.

You will increase production and lower tooling costs with Wendt-Sonis carbide cutting tools. They are all available with the new W-S carbide in all standard grades. Wendt-Sonis makes a complete line for every application.

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POCKET COMPARATOR

6 Power Magnification

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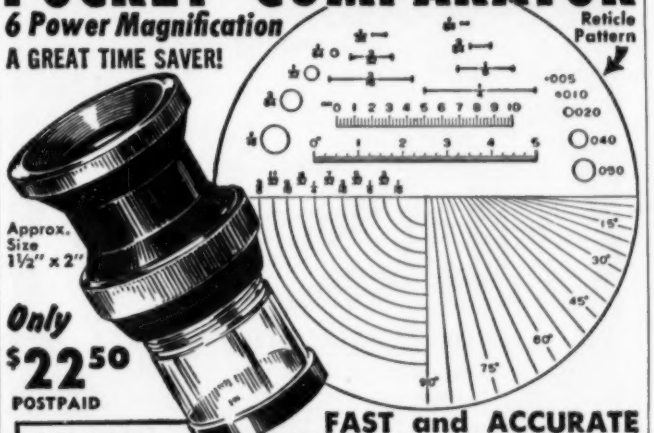

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Key-Control is Berger's new handle-free industrial steel locker. The key is the only handle required. The door *pre-locks* when opened, and locks *automatically* when shut. Where the user might forget, the Key-Control locker always "remembers" that personal possessions deserve full-time locked protection.

With Key-Control, there are no padlocks to misplace, no dials to turn, no handles to maintain. No handle noise. Get all the facts from your Berger representative, or write Berger for details, specifications and quotations. Only Berger offers Key-Control Steel Lockers—plus the biggest selection of standard steel lockers.

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REPUBLIC STEEL
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VISCOSITY METER
performs under variety of difficult corrosion, temperature conditions

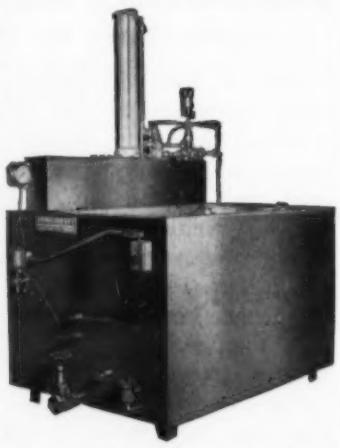
A practical method of supplying continuous measurement, recording and control of viscosity of materials in process is provided by the Viscometran. Instrument performs successfully under variety of corrosion and temperature conditions with paper coatings, starch, glues, paint solutions, catalyst and crystal slurries, polyvinyl acetate solutions and flour-water mixtures.

In operation, torque required of synchronous motor to rotate a spindle in liquid under test is transmitted as electric signal to a suitable receiver. Viscosity is measured at constant rate of shear since spindle rotates at constant speed. Instrument can be used for applications involving base mount temperatures up to 200° F and in vacuum from 8 mm of mercury to pressure of 100 psi. Mounted on a 4-in. 125-lb standard pipe flange, instrument can be used on either tank, kettle or in flow line by-pass. Made by **Brookfield Engineering Laboratories, Inc.,** 240 Cushing St., Stoughton, Mass.

For more details circle NED-97 A4 on enclosed inquiry slip

PARTS CLEANING MACHINE
tray holding parts is agitated when lowered in cleaning solution

Operator of this industrial agitating type parts cleaning machine need not raise or lower parts to be cleaned or get his hands near or into the solvent type cleaning solution. Parts are moved directly from the plant conveyor to the table-height tray of the machine and are similarly removed after cleaning. They can be loaded on the tray separately or in baskets, depending upon size.



Pressing a button lowers the tray into the tank where it is pneumatically "sloshed" up and down at the rate of 40 strokes per minute. Tank can be operated cold or heated with steam, gas, oil or electricity. Temperature can be controlled between 80 and 212° F. Maximum tank size is 6 ft long, 4 ft wide and 42 in. high; smaller sizes can be made. Made by **Cincinnati Cleaning & Finishing Machinery Co.,** Sharonville, O.

For more details circle NED-98 A4 on enclosed inquiry slip

HOMER PERMANENT non-electric MAGNETIC DRUMS and DUCTS for AUTOMATIC REMOVAL of TRAMP METALS

Pat. Pending

HOMER Magnetic Ducts for the removal of tramp iron from Air or Gravity conveyed Grains, Textile and Chemical materials, etc. These units are used with almost any type of processing machinery.

HOMER Magnetic Drums for removal of tramp iron from fine or pulverized dry products, as, Foods, Chemicals, Plastics, Paint Pigments, etc. These units can be used with chutes, hoppers, screw or belt conveying machinery.

Send for detailed information.

The HOMER MANUFACTURING CO., Inc.
Dept. 1-25 LIMA, OHIO

Producers of Magnetic Separator Equipment Since 1923

For more details circle NED-100 A4 on enclosed inquiry slip

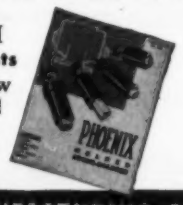
You Can Cut MOTOR COMPONENT COSTS with PHOENIX Brush Holders

PHOENIX Molded or Assembled Motor Brush Holders are custom-designed to your exact specifications—yet delivered to you at mass production costs!

Secret is a wide range of stock tools which produce an infinite variety of uniform top-quality, close-tolerance brush holders.

Take a hint from the large number of manufacturers already saving on component costs with Phoenix . . . Get the full details now!

SEND FOR CATALOG 53 I
Shortcut to Lower Production Costs
New Phoenix Catalog shows how to order customized standard brush holders to fit your needs. Free on request.



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711 West Lake Street Chicago 6, Illinois

For more details circle NED-101 A4 on enclosed inquiry slip

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MACHINE SCREWS
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ELCO TOOL AND SCREW CORPORATION
1946 BROADWAY • ROCKFORD, ILLINOIS

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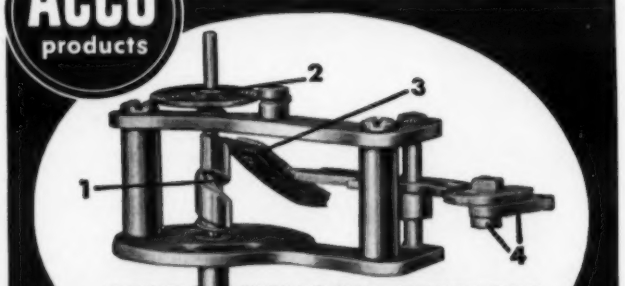

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1. Stainless Steel Helicoid Roller (no gear teeth)
2. Stainless steel hair spring
3. Long Life Cam (no gear teeth)
4. Corrosion-resistant link and screws

NO GEARS, NO TEETH

The HELICOID movement is a simple cam and roller device that gives long, trouble-free service. Tested and proved in field. Retains original accuracy longer, lasts longer, costs less per gage, per year.

Many sizes, many styles
For pressure, vacuum, or compound service—all ranges; white, black, radiant faces; wall, stem, flush, panel mountings, or flangless cases.
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HELICOID Pressure • Vacuum GAGES

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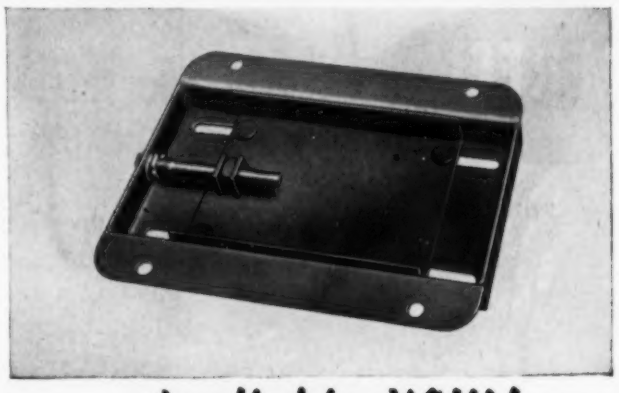

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for the new NEMA re-rated motors — Improved, simplified design.

Overly-Hautz can furnish, from stock, completely adjustable motor bases of sturdy two-piece construction with cadmium plated adjusting screw.

Tested and approved for immediate delivery: — Sizes 182, 184, 213 and 215.

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THE OVERLY-HAUTZ CO.
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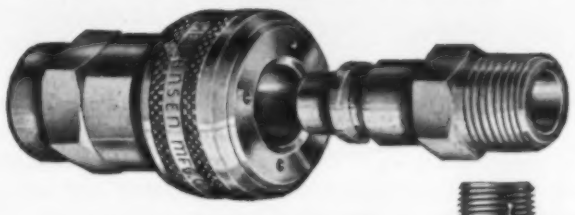
HANSEN

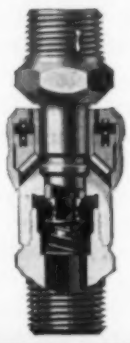
QUICK-CONNECTIVE

PUSH-TITE COUPLING

TRADE MARK

Provides Instant Automatic Flow or Shut-Off





To connect a Hansen Push-Tite Coupling, you merely push the Plug into the Socket with one hand. Flow is instantaneous.

To disconnect, push back sleeve on Socket . . . Coupling disconnects and flow is shut off instantly and automatically. No tools required. When Coupling is connected, Plug is free-swiveling, thus eliminating any possibility of kinks in hose.

Two-way shut-off and straight-through Couplings also available.
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THE HANSEN MANUFACTURING COMPANY
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22.6% more air
PER POWER DOLLAR

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DEVILBISS

THE DEVILBISS COMPANY
Toledo, Ohio

Barrie, Ontario • London, England • Santa Clara, Calif.

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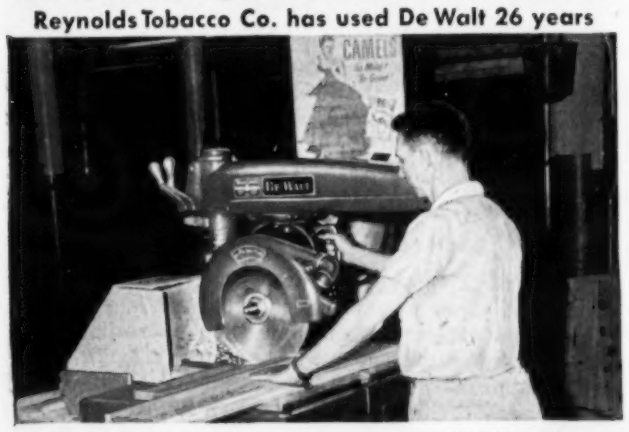
All-Purpose AMF De Walt is best for plant maintenance!

Reynolds Tobacco Co. has used De Walt 26 years



You'll find *one* low-cost AMF DeWalt® will meet *all* your plant maintenance needs—and that includes all types of construction work and boxing and crating.

Just one DeWalt turns out pallets, conveyor bucks, crating, book shelves, ladders and many other products. It's amazingly versatile—cross-cuts, miters, bevels, rips, dadoes, shapes and many others! Tops in speed, accuracy and safety, too.

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DeWalt Inc. Lancaster, Pa.

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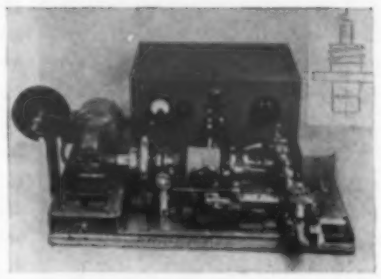
POWER SAWS
In Canada: DeWalt Canada Ltd., Guelph, Ontario

Subsidiary of AMERICAN MACHINE & FOUNDRY COMPANY, New York

For more details circle NED-105 A4 on enclosed inquiry slip

SMALL-PARTS WELDER
makes up to 1200 welds per hour



Miniature electronic parts are welded automatically at speeds up to 1200 per hour with this Tweezer-Weld model SW-412 electric welding machine. It feeds, welds, forms and cuts off to close tolerance 0.003-in. diameter spool-fed wire to an anode pin assembly. Unit also cuts off the whisker at a 30 or 45-degree angle to provide sharp contact. Operator is required only to load and unload pieces at various stations. Made by **Federal Tool Engineering Co.**, 1384 Pompton Ave., Cedar Grove, N. J.

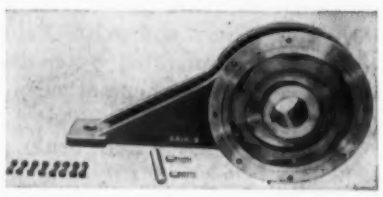
For more details circle NED-106 A4 on enclosed inquiry slip

SILICON CARBIDE WHEELS
for grinding tungsten carbide tools

Fast and cool cutting is feature of series of SiClone silicon carbide wheels developed for grinding tungsten carbide tools. Long life is attributed to ingredients in the vitrified bond combined with a distribution of the abrasive particles which enables them to penetrate and cut tungsten carbide with maximum efficiency. Wheels are stocked in the popular grits and grades, sizes and shapes, including plate-mounted wheels, cylinders, straight wheels and cups. Made by **Fuller Merriam Co.**, 69 Water St., West Haven 16, Conn.

For more details circle NED-107 A4 on enclosed inquiry slip

ROLLER TYPE HOLD-BACK
prevents incline conveyor reversal



Reversal of bucket elevators and inclined conveyors because of power failure under load is prevented by this S-A enclosed roller type hold-back. It consists of inner member with wedge pockets for six hardened rollers which rotates with shaft. When shaft attempts to reverse, rollers wedge against an outer cylinder. Release is instant when forward motion of shaft is resumed. Hold-back mounts directly on drive shaft, with torque arm bolted to a support strong enough to resist load of reversal. Maximum torque resistance ranges up to 350,000 lb-in. for units with maximum bore of 7 in. Made by **Stephens-Adamson Mfg. Co.**, Standard Products Div., 12 Ridgeway Ave., Aurora, Ill.

For more details circle NED-108 A4 on enclosed inquiry slip

Tough! Flexible! Fire Resistant!

U. S. ROYAL CORDS AND CABLES

For light, power and control applications, United States Rubber Company offers a complete line of electrical conductors, power cables, flexible cords, flexible power cables, signal and communication cables.

For more information write the nearest U. S. Rubber Branch or the address below.

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Electrical Wire and Cable Department, Rockefeller Center, New York 20, N. Y.

For more details circle NED-109 A4 on enclosed inquiry slip

ZIP OFF

SCALE
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AURAND CLEANING TOOLS

AURAND rotary chipping action quickly, easily, thoroughly removes scale, paint, rust, and other accumulation from any hard surface. Renewable cutter heads and fool-proof cutting depth adjustment allow the unskilled operator to produce perfectly clean surfaces. Available in electric or pneumatic models. Write today for further information on cleaning your iron, steel, brick, concrete, and other hard surfaces.

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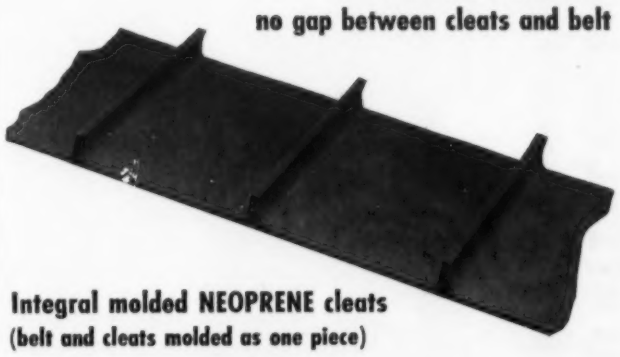
Only Portable Conveyor Belt of its kind

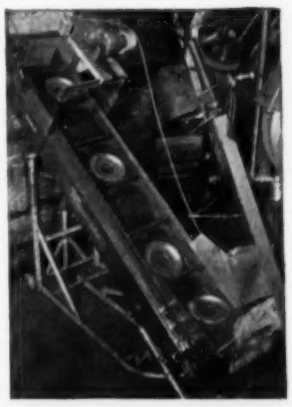
CINCINNATI Cleat Conveyor Belt

Over 2 years of the most rigid tests have proven that the CINCINNATI CLEAT CONVEYOR BELT is positively the most practical and most economical portable conveyor belt . . . takes the place of all bolted-on cleat belts.

No stress or strain . . . no gap between cleats and belt



Integral molded NEOPRENE cleats
(belt and cleats molded as one piece)



Cincinnati Cleat Conveyor Belt installation at Industrial Wire Cloth Products Corp., Wayne, Mich.

- Eliminates costly shut-down time due to cleat failure.
- Eliminates catching of small parts under cleats.
- Eliminates deterioration due to oil and grease.
- Eliminates cost of attaching cleats or repairing cleats later.

No other portable conveyor belt has such high abrasive resistance . . . compare and you'll be convinced. Wherever inclined conveyors are used there's a need for Cincinnati Cleat Conveyor Belts.

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F. B. WRIGHT CO.

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For more details circle NED-111 A4 on enclosed inquiry slip

Lightweight-Economical

IT'S THE REVOLVATOR® UPLIFTER ELEVATOR

Adaptable for shop use or warehouse handling and ideal for shipping and receiving — the new electric Uplifter is the real buy today in materials handling. In two capacities, 1000 - 2000 pounds, platform sizes 24 x 24 and 30 x 30, lifts of 62 and 55 inches on standard models — the Revolvator Uplifter can be had powered by a variety of electric circuits ranging from an automobile battery to 220 volt currents.

Priced under all competition, the Uplifter includes all the safety and convenience features that have made Revolvator portable elevators a standard in industry. Get full information today on this new, easy operating inexpensive portable elevator. Remember, too — we build Revolvator Portable elevators to your particular needs.

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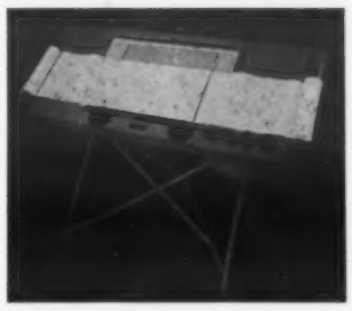
▲ For more details circle NED-112 A4 on enclosed inquiry slip ▲

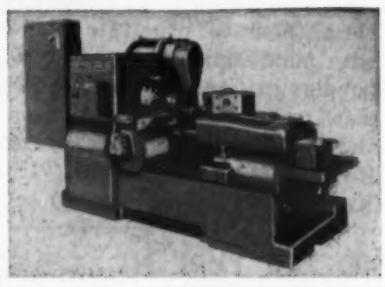
RECORD READER
measures film, oscillograph records



By means of rapid cross-wire motion with accuracy of 0.01-in., this Contact Telereader measures film and oscillograph records many times faster than is possible by manual methods. Reader handles single sheet or roll records of any length and widths up to 18 in. Measurements can be made between a trace and base line, between two traces or peak-to-peak on oscillatory traces. Unit handles both orthogonal records and records with curved coordinates. In addition, linear or nonlinear calibrations can be applied electronically or graphically. Calibrated or uncalibrated ordinates can also be accumulated to provide mean values or areas. Output can be easily transcribed or speedily and automatically recorded with companion equipment. Made by **Telecomputing Corp.**, Engineering Dept. UTN, 133 E. Santa Anita Ave., Burbank, Calif.

▲ For more details circle NED-114 A4 on enclosed inquiry slip ▲

TURRET LATHE
designed to use carbide tools for fast removal of metal



A 25-hp motor combined with carbide tools enable the model 4U automatic turret lathe to effect rapid removal of even hard-to-machine metals. The 8-in. type A-1 American Standard spindle nose takes 10, 12 or 15-in. chuck sizes. Spindle is mounted in heavy duty Timken double taper roller bearings, front and rear. Four instantaneous speed changes are provided by multidisk friction clutches that are electro-pneumatically controlled by adjustable dogs.

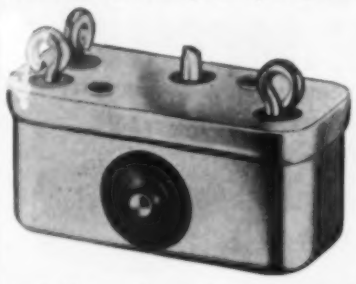
Magnetic clutch and brake cushion starting and stopping. Six-faced turret is indexed with a Geneva movement and is accurately positioned by a large lock bolt. Turret slide has a travel of 12 in., of which 8 in. is feed. Coolant can be pumped overhead for turning tools or through bars for boring and drilling.

Front and rear cross slides are independent, being individually operated by large cam drums to work with any or all turret faces. Standard travel and feed of 4½ in. and 2 in. of auxiliary travel to operate turret slide tools are provided. All machine functions are controlled from a dog drum. Made by **Potter & Johnston Co.**, Pawtucket, R. I.

▲ For more details circle NED-115 A4 on enclosed inquiry slip ▲

HERMETICALLY SEALED SWITCH
resists environmental extremes

The positive-action, hermetically-sealed, snap-action switch illustrated eliminates all guesswork from the hazards of sand, dust, ice, humidity, temperature extremes, oil, grease, water or fungus. This unusual switch has a one-piece, heavy-duty beryllium copper switch blade, with pure silver contacts welded in position, thus offering excellent electrical and thermal conductivity and increasing contact life up to 300% over ordinary switches.



The actuator pin is bonded in specially developed silicone like a shock mount and its sealed construction assures positive operation under all climatic conditions from −70° F to +200° F. It is available in single-pole, double-throw, two-circuit type, or double-pole, double-throw. It is currently being widely used in aircraft applications because its high contact pressure makes it resistant to extreme vibration. This switch is the smallest hermetically sealed snap switch on the market. For more details and specifications write **Haydon Switch, Inc., 232 North Elm Street, Waterbury, Conn.** *Advt.*

▲ For more details circle NED-117 A4 on enclosed inquiry slip ▲

PENETROL saves PITTSBURGH STEEL CO. 1¼ mile steel trestle from destruction under excessive corrosive conditions!

AIR-DRYING OIL

1¼ miles of steel trestle . . . carrying endless strings of cars loaded with freshly-quenched granulated slag, that drip chemical and acid contaminated water on the structure continually . . . *yet it is safe and strong, in every joint and surface, because it's PENETROL protected!*

Here's what Jack Moreland, Supervisor of Painting, Pittsburgh Steel Co., Monessen, Pa., says: "This was a tough condition in 1941. We were becoming aware of the fact that thousands of joints and the large areas of flat surfaces in this trestle, were being subjected to rust and corrosion from many different sources.

PENETROL was slushed into all joints and also applied to other pitted and rusted areas, during the time the surfaces were being cleaned for painting. The whole structure was given two coats of paint, each fortified with PENETROL. In 1947, the joints were okay . . . did not need special treatment . . . and we repainted the entire structure with paint to which we had added the protective qualities of PENETROL. In 1954, the joints and general structure still are in good condition, thanks to PENETROL!"

Ever since this outstanding performance, the Pittsburgh Steel Company Monessen Mill has used the PENETROL system of protection on all its steel structures. Ask us about this time-proved method, and let us help solve your rust and corrosion problems.

PENETROL PRICES: 5 Gal. $15.75; 30 Gal. $88.50; 55 Gal. $159.50, F.O.B. Hudson, Ohio. Free Literature!

PENETROL® is manufactured by **THE FLOOD COMPANY, HUDSON, OHIO**

▲ For more details circle NED-113 A4 on enclosed inquiry slip ▲

STREAMLINED AND RUGGED

BRAND NEW

Cast Iron Housing

Black Wrinkle Finish

Sponge Rubber Skid Pad

LINEMASTER CLIPPER FOOT SWITCH

The streamlined Clipper Switch matches your unit's most modern features! Complete with all the rugged features of a heavy industrial switch. It is easily operated from sitting or standing position giving the worker a free hand for greater efficiency. Nearly 100% dustproof and yet accessible to wiring—just two screws to remove to reach interior mechanism.

Size—4½" x 3½" x 1½" Wght. 2 lbs.

WRITE FOR BULLETIN AND PRICES

Let us quote on your switch requirements

LINEMASTER SWITCH CORP.

424 Woodstock Terrace • Woodstock, Conn.

▲ For more details circle NED-116 A4 on enclosed inquiry slip ▲

OSBORN

He knows how to save time ...*yours* too!

ANY painter will tell you...the best in brushes costs less in the long run because it saves valuable manhours. And there's a moral here for industrial buyers, too...

The best in brands gives you the key to lowest purchasing costs. There's no need to take time to shop around. For example: In buying brushes, you can cut red tape by simply marking your order cards, "Buy OSBORN". You can buy this leading brand automatically with confidence because they are backed by 61 years of OSBORN service to Industry. Write for free pocket catalog. *The Osborn Manufacturing Company, Dept. Z-13, 5401 Hamilton Avenue, Cleveland 14, Ohio.*

Osborn Brushes

OSBORN MAINTENANCE, PAINT AND POWER BRUSHES • FOUNDRY MOLDING MACHINES

▲ For more details circle NED-118 A4 on enclosed inquiry slip ▲

Protect

Expensive GAGES

Sprague Shut Off Valves automatically cut out gages and other pressure-sensitive instruments when fluid pressures go beyond their operating limits. Automatically open when pressure is again within approx. 80% of set cut-out points. Available for any pressure setting between 10 PSI and 5000 PSI.

Save valuable man hours. Eliminate opening and closing manually operated shut off valves. Supplied with standard pipe thread connections, also available with AN tube fittings. Body is 1½" aluminum hexagon stock. Length 5½". Bronze or stainless steel bodies also available. Easy to install. Thousands in use. Write for bulletin.

SPRAGUE
Engineering and Sales Corp.
1144 WEST 135TH ST., GARDENA, CALIF

▲ For more details circle NED-119 A4 on enclosed inquiry slip ▲

CMH REX-FLEX

HIGH PRESSURE

CORROSION RESISTANT

FLEXIBLE METAL HOSE

Stainless steel Rex-Flex is corrugated metal hose designed to convey a wide range of searching liquids or gases at high temperatures. Although light in weight, it is extremely durable and flexible and absorbs prolonged cycles of vibration, flexation and vari-plane motion. Rex-Flex is fabricated in both annular and helical convolutions in a wide range of sizes, complete with fittings.

See us at Booth 1144, PLANT MAINTENANCE SHOW

FLEXONICS CORPORATION
Formerly Chicago Metal Hose Corporation
1343 S. Third Avenue, Maywood, Illinois
Manufacturers of flexible metal hose and conduit, expansion joints, metallic bellows and assemblies of these components.
In Canada: Flexonics Corporation of Canada, Ltd., Brampton, Ontario

For more details circle NED-120 A4 on enclosed inquiry slip

Where corrosion . . temperature . . pressure cause other valves to fail . . .

use HOMESTEAD *Lever-Seald* PLUG VALVES

THEY'RE "STICK-PROOF"

Operate Instantly . . Everytime . . Anytime

For more than 20 years, in practically every type of industry, HOMESTEAD LEVER-SEALDS have been giving trouble-free performance in services where extremes of temperature or pressure or corrosive line fluids cause ordinary valves to "stick" or "seize."

HOMESTEAD Lever-Seald PLUG VALVES are "Stick-Proof" because they're "Lever-Seald," which means that a powerful lever-and-screw device, built into every valve, assures positive action at all times under all conditions.

They operate fast, too—full open or closed by a quarter-turn; and because all operating parts are protected from line fluids, service conditions and weather, they last longer and cost less to maintain.

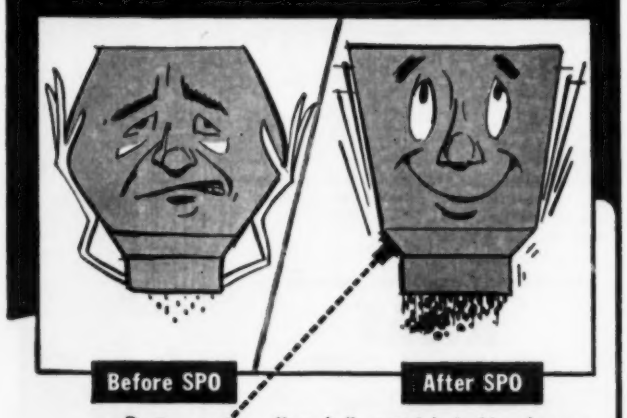
We make them in metals and alloys to suit your requirements in sizes 1½" to 12", for pressures from vacuum to 1500 lbs. and for temperatures ranging from 40° below zero to 1100° F.

WRITE TODAY for Valve Reference Book No. 39-3, No Obligation

HOMESTEAD VALVE MANUFACTURING CO.
"Serving Since 1892"
P. O. BOX 84 CORAOPOLIS, PA.

For more details circle NED-121 A4 on enclosed inquiry slip

SPO air vibrators FOR CLOGGED BINS



Keep bulk materials in bins, hoppers and chutes jam-free with SPO pneumatic vibrators. These dependable, powerful, low cost units feature full-power starting, high-speed operation and a long trouble-free service life. Eliminate unnecessary production bottlenecks . . . get a steady flow with SPO vibrators.

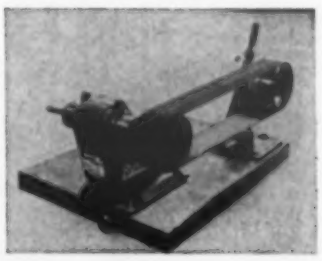
1780-32 SERIES 81

Write for Bulletin 50 for complete details.

SPO INCORPORATED
6475 Grand Division Avenue • Cleveland 25, Ohio

For more details circle NED-122 A4 on enclosed inquiry slip

BACKSTAND GRINDER has air-inflated contact wheel



Bench type belt grinding machine which incorporates a Nu-Matic air-inflated contact wheel can be used for deburring, finishing, grinding and similar operations. Resilient contact wheel flattens out at point of contact, resulting in large abrasive contact area for fast finishing. Belt is self-cleaning when it passes over the flattened wheel. Backstand assembly, developed by Ryman Engineering Co., uses a 60-in. abrasive belt and will accommodate 5 and 8-in. diameter Nu-Matic drums. Idler wheel is mounted on a spring-loaded lever that is manually operated to facilitate belt change and maintain proper belt tension. Accessories include steel base, motor, motor mount and steel legs to make a table model. Available from **Nu-Matic Grinders, Inc.,** Dept. A, 8224 Carnegie Ave., Cleveland 3, O.

For more details circle NED-123 A4 on enclosed inquiry slip

ADJUSTABLE MOTOR BASE for NEMA rerated motors

Improved model all steel adjustable motor base is designed to fit new sizes of NEMA rerated motors. It is offered assembled with cadmium plated adjusting screw. Bases to fit all NEMA sizes of older motors are also carried in stock. Made by **Overly-Hautz Co.,** 11502 Madison Ave., Cleveland 2, O

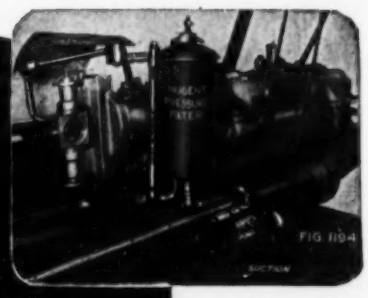
For more details circle NED-124 A4 on enclosed inquiry slip

FOLDING STACKING RACKS carry loads of 3000 to 5000 lb

Feature of this portable self-stacking rack for miscellaneous materials is the way ends fold inside rack frame when empty, or when being shipped. Ends swing up and lock in vertical position for safe, fast handling and storage. Racks are made in wide range of sizes and are capable of carrying loads of 3000 to 5000 lb. They can be stacked as much as six tiers high, loaded to the full limit. Floors of plywood, boards, or sheet steel are available. Made by **American Metal Products Co.,** 5971 Linsdale Ave., Detroit 4, Mich.

For more details circle NED-125 A4 on enclosed inquiry slip

20 times more Filtering Area with Nugent Cutting Oil and Coolant Filters



Nugent Pressure Filter installed on turret lathe for filtering cutting compound.

NUGENT Cutting Oil and Coolant Filters provide 20 times more filtering area than other filters of comparable size. This means better filtering—and better filtering means a great savings in lubricants, longer tool life and fewer rejects.

Nugent pressure filters of this type are built in capacities from ¼ to 350 GPM for any machine that uses oil or cutting fluids.

Write for Complete Information

Wm. W. Nugent & Co., Inc.
401 N. Hermitage Ave. CHICAGO 22, ILLINOIS
Est. 1897

Oil Filters, Oiling and Filtering Systems, Telescopic Oilers, Oiling Devices, Sight Feed Valves, Flow Indicators . . . *Representatives in Principal Cities*

For more details circle NED-126 A4 on enclosed inquiry slip

Reduce Fire Hazards!

Get HOUGHTON'S New PLANT **SAFETY** BULLETIN

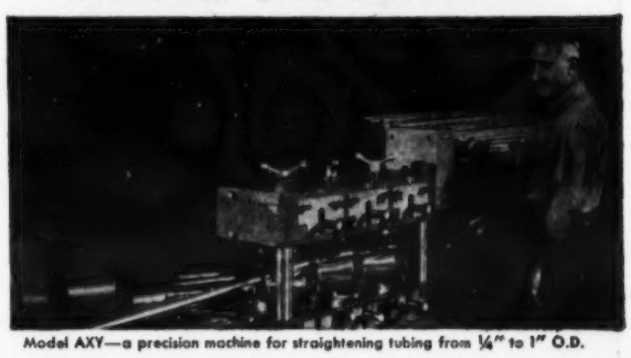
. . . shows you how Houghton processing products reduce the danger of fire four ways in metal-working plants. Covers Houghton's high-flash-point solvent type RUST PREVENTIVES . . . water-solution COLD CLEANERS for production lines . . . non-flammable HYDRAULIC FLUID . . . Antisep All-Purpose CUTTING BASE for water-emulsion machining. Ask the Houghton Man for a copy or write to E. F. Houghton & Co., 303 W. Lehigh Avenue, Philadelphia 33, Pa.

E. F. HOUGHTON & CO. PHILADELPHIA 33, PA.

For more details circle NED-127 A4 on enclosed inquiry slip

If you want tubing STRAIGHT AS AN ARROW

you have a job for a MACK-HEMP *guideless* ROTARY STRAIGHTENER



Model AXY—a precision machine for straightening tubing from ¼" to 1" O.D.

Constantly, more and more manufacturers of varied products which include pipe and tubing (ferrous and non-ferrous) are placing Mack-Hemp guideless Rotary Straighteners in their production lines with substantial advantage. These machines are available in 12 sizes to handle the tiniest tubing (1/16" O.D.) to large pipe up to 15" O.D., meeting straightness and roundness specifications of unusually close tolerances.

Why not investigate what these Mack-Hemp guideless Rotary Straighteners are accomplishing for others—evidenced by many case histories in our files? They can probably solve your problem also! Send the coupon below for Bulletins No. 52 and S-7265.

Model A-4—one of the largest machines, will straighten pipe 5" to 15" O.D.

MACKINTOSH HEMPHILL CO.
Machinery Department, Ninth & Bingham Streets, Pittsburgh 3, Pa.
Makers of the Rolls with the Striped Red Wobblers

☐ Please send me Bulletins No. 52 and S-7265 giving case histories and detailed information about MACK-HEMP guideless Rotary Straighteners.

I am interested in straightening: _____ Type & Size of tubing

Name _____ Title _____

Company _____

Address _____

For more details circle NED-128 A4 on enclosed inquiry slip

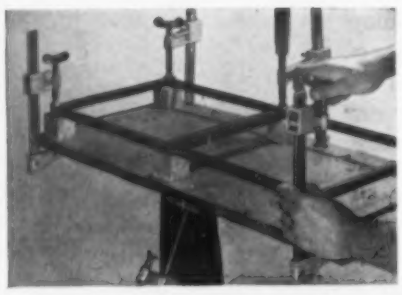
● With every press on foot pedal Model 214 Chicago Double Rivet Setter automatically feeds, inserts and clinches *two* rivets. 14-inch throat accommodates large assemblies. Handles 9/64" diameter or smaller steel tubular rivets—lengths to 7/8". Quick Change Rotary Type Hoppers and Raceways permit 5-minute changeover to rivets of different size. Adjustable anvils and riveting centers add to versatility. For help with fastening problem. . . send sample assembly (or a blue print) for free fastening analysis.

FREE CATALOG *contains valuable engineering information and rivet specifications plus illustrated descriptions of 26 Chicago Automatic Rivet Setters.*

Chicago Rivet & MACHINE CO.
9606 West Jackson Boulevard, Bellwood (Chicago Suburb) Illinois
Branch Factory: Tyrone, Pa.

▲ For more details circle NED-130 A4 on enclosed inquiry slip ▲

HINGED CLAMPS
plate on foot end is hinged



Repetitive production clamping operations can be speeded up by application of Jorgensen hinged clamps. They are provided with a hinged plate on the foot end by which the clamps can be mounted on any flat surface. Hinge action permits them to be placed in clamping position or out of the way but ready for instant use. Sliding head of the clamps adjusts instantly and holds securely any place on the bar. Extra hinge plates are available for permanent mounting, from which lamp bar can be attached or removed without tools. Four models are available, with reaches from 2 to 5 in. and opening capacities from 6 to 30 in. Made by **Adjustable Clamp Co.**, Dept. ND, 417 N. Ashland Ave., Chicago 22, Ill.

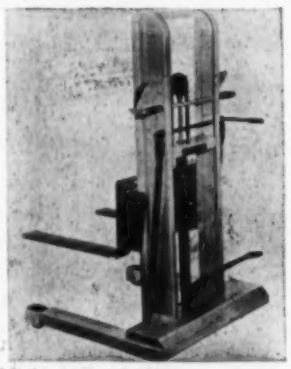
▲ For more details circle NED-133 A4 on enclosed inquiry slip ▲

MINIATURE ELECTRIC MOTOR
rated 1/30-hp at 6000 rpm

Miniature electric motor capable of delivering 1/30-hp at 6000 rpm is now available for special applications. It can be used to operate hydraulic valves and drive stabilizing gyros. Developed originally for missile applications, motor has a life of 1 hour in continuous operation. Made by **John Oster Mfg. Co.**, 1601 Ann St., Racine, Wis.

▲ For more details circle NED-134 A4 on enclosed inquiry slip ▲

HYDRAULIC PUMP
triples lift truck elevating speed



Lifting speed of all foot-operated Big Joe hydraulic lift trucks is tripled on loads up to 250 lb by newly added Triple Action hydraulic pump. Loads formerly lifted 1⅛ in. by each foot stroke are now lifted 3½ in. per stroke, and effort required to pump the pedal has also been considerably reduced. Foot pedal is hinged so that it can be moved out of way by operator to make lift truck movement easier. Made by **Big Joe Mfg. Co.**, 908 W. Jackson Blvd., Chicago 7, Ill.

▲ For more details circle NED-135 A4 on enclosed inquiry slip ▲

THE WIDE BAND POCKETSCOPE BY WATERMAN
MODEL S-14-B ®

Another Waterman POCKETSCOPE confirming the obsolescence of conventional oscilloscopes. Characterized by wide band amplifier fidelity without peaking as well as amazing portability. S-14-B POCKETSCOPE is ideal for laboratory and field investigation of transient signals, aperiodic pulses, or recurrent electrical wave forms.

Wt. 14 lbs. 12"x 6"x 7"

Vertical channel: 50mv rms/inch, with response within —2DB from DC to 700KC, and pulse rise of 0.35 μs. Horizontal channel: 0.3v rms/inch with response within —2DB from DC to 200KC, and pulse rise of 1.8 μs. Non-frequency discriminating attenuators and gain controls, with internal calibration of trace amplitude. Repetitive or trigger time base, with linearization, from ½cps to 50KC, with ± sync. or trigger. Trace expansion. Filter graph screen. Mu metal shield. And a host of other features.

WATERMAN PRODUCTS CO., INC. PHILADELPHIA 25, PA.
CABLE ADDRESS: POKETSCOPE

WATERMAN PRODUCTS INCLUDE:

S-4-A SAR	PULSESCOPE
S-5-A LAB	PULSESCOPE
S-10-B GENERAL	POCKETSCOPE
S-11-A INDUSTRIAL	POCKETSCOPE
S-14-A HIGH GAIN	POCKETSCOPE
S-15-A TWIN TUBE	POCKETSCOPE

Also RAKSCOPES, LINEAR AMPLIFIERS, RAYONIC TUBES and other equipment

WATERMAN PRODUCTS

▲ For more details circle NED-137 A4 on enclosed inquiry slip ▲

H_2O anyone?

● If you need or use between 200 and 100,000 gallons per minute of clean water, find out how Cuno's FLO-KLEAN filters can save you money. In hundreds of applications throughout industry, the fully automatic, continuously self-cleaning FLO-KLEANS have paid for themselves many times over by making raw river, lake, or well water fit for industrial use—and reclaiming process water. Write for the free FLO-KLEAN bulletin. The Cuno Engineering Corporation, Dept. 702F Meriden, Connecticut.

3.2

▲ For more details circle NED-131 A4 on enclosed inquiry slip ▲

How to check precision gears quickly, conclusively, to closest tolerances

With the Kodak Conju-Gage Gear Checker, you pass every right gear, reject every wrong gear—check tooth-to-tooth composite error of .0002".

The revolutionary Kodak Conju-Gage Worm Section, used with both spur and helical gears, provides a new standard of gage precision, combines accuracy with economy. Results are recorded automatically for permanent reference.

Write for a copy of the booklet, "Kodak Conju-Gage Gear Testing Principle," which shows how Conju-Gage Instrumentation can help solve your precision gear problems.

Special Products Sales Division
EASTMAN KODAK COMPANY
Rochester 4, N. Y.
Kodak
CONJU-GAGE INSTRUMENTATION

▲ For more details circle NED-132 A4 on enclosed inquiry slip ▲

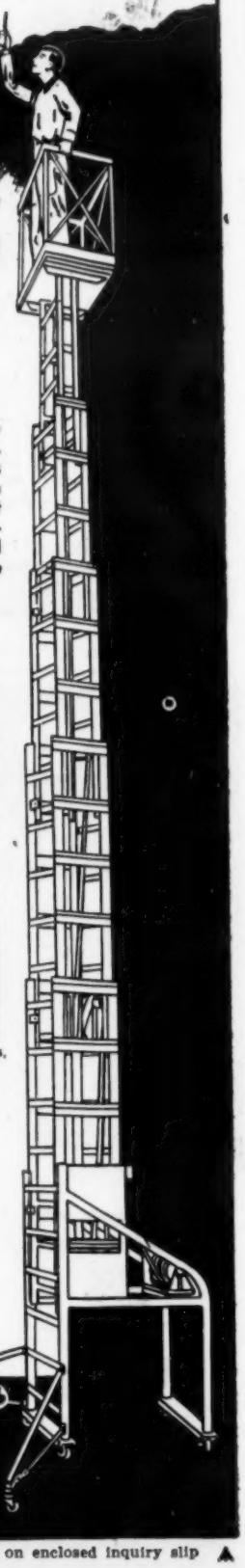
HANDLE DRUMS and BARRELS? *you are losing money and time* THIS WAY

You can minimize your handling cost by using the Sabin One-Man Barrel truck. Containers up to 800 pounds are easily picked up by running truck up to them, hooking on at top and pulling back on handle. *Third Wheel feature* insures added safety in moving loads. *WRITE FOR BULLETIN NO. 48-A*

CHANGE TO THIS.
SABIN TRUCK
•
THE SABIN MACHINE CO.
6536 Carnegie Avenue
Cleveland 3, Ohio

▲ For more details circle NED-136 A4 on enclosed inquiry slip ▲

UP! UP! UP! TO ANY DESIRED HEIGHT



EASILY... SAFELY... ECONOMICALLY
HI-LIFT *EXTENSION* **SCAFFOLD**

Models extend from 6 ft. 10 in. (can be made lower) to any desired height. Hand or electrically operated. Comes to you ready for work — no erection required, no loose parts. Built to meet individual requirements. Ideal for painting, lighting, cleaning, and all overhead maintenance. Pays for itself in time and labor saving.

MOST VERSATILE SCAFFOLD ON THE MARKET

Set up in aisles and work on both sides.

Resting on roof trusses.

Over machines in factories, in warehouses, bank cages, etc.

Straddle seats in theaters, auditoriums, etc.

Write for Complete Literature
ATLAS INDUSTRIAL CORP.
853 - 39th Street
Brooklyn 32, N. Y.

▲ For more details circle NED-138 A4 on enclosed inquiry slip ▲

A WIDE RANGE INDICATING CONTROL

TYPE E8N

The type E8N indicating control is ideal for installations where an exact temperature reading must be readily available at all times. It is a broad range, precision-built unit that shows the exact temperature of the thermal bulb at all times. The E8N is compensated accurately for wide ambient temperature changes, is simple in design and contains no delicate mechanisms. Various models are available covering ranges of 300° F to 600° F between limits of -150° F to 600° F. On-off differentials available as low as .25° F. Complete details and electrical specifications are contained in bulletin #4-1, write for it today.

UNITED ELECTRIC CONTROLS COMPANY
81 School Street, Watertown, Mass.

STANDARD & SPECIAL THERMOSTATS & PRESSURE SWITCHES

▲ For more details circle NED-139 A4 on enclosed inquiry slip ▲

Now Available in 3, 4 and 5 ft. Sections

The new AAF Multi-Duty Filter is tailored to fit the tight spots! Addition of the 5-ft. section permits most economical combination of filter widths to fit limited space. Over-all depth of filter is reduced 5½ inches.

Greater versatility, lower installation costs, important space savings—you get them with the new Multi-Duty, plus the proved performance of America's "most specified" automatic, self-cleaning air filter. Write for Bulletin 241.

AAF American Air Filter COMPANY, INC.
391 Central Avenue, Louisville 8, Kentucky
American Air Filter of Canada, Ltd., Montreal, P. Q.

▲ For more details circle NED-140 A4 on enclosed inquiry slip ▲

PURE WATER

PROBLEMS SOLVED WITH Barnstead EQUIPMENT

DISTILLED WATER?

In hundreds of manufacturing processes, where complete purity is needed, Barnstead Stills provide the highest-quality, lowest-cost, chemically pure, sterile water from ½ to 1000 gallons per hour. With over 100 different models to choose from, Barnstead can provide the exact still to fit your particular needs. For Barnstead Laboratory and Industrial stills are the proven standard of the scientific and industrial world.

DEMINERALIZED WATER?

Where modern manufacturing processes require only high-test mineral-free water, Barnstead Demineralizers are the best producers . . . 5c per 1000 gallons with a minimum of supervision and maintenance. Many new industries are turning to Barnstead Demineralized Water for greater production, fewer rejects and better quality control.

WRITE

Catalog #123 gives both sides of the Pure Water Picture. Since Barnstead makes both stills and demineralizers, you'll find this catalog complete, authoritative, unbiased. Write Today!

Barnstead STILL & STERILIZER CO.
First in Pure Water since 1878
16 Lanesville Terrace, Forest Hills, Boston 31, Mass.

▲ For more details circle NED-141 A4 on enclosed inquiry slip ▲

GAS UNIT HEATER
seven models range to 200,000 Btu

Seven basic models of this self-contained automatic gas unit heater range in capacity from 25,000 to 200,000 Btu heat input and carry both AGA and UL approval. Design features include raised port design burner, removable burner drawer, automatic gas control valve, gas pressure regulator and automatic safety pilot. Unit can be used with natural, manufactured, mixed, or liquefied petroleum gas. Burners, orifices and controls are varied according to characteristics of gas to be used. Made by **Warren Webster & Co.**, 1707 Federal St., Camden 5, N. J.

▲ For more details circle NED-142 A4 on enclosed inquiry slip ▲

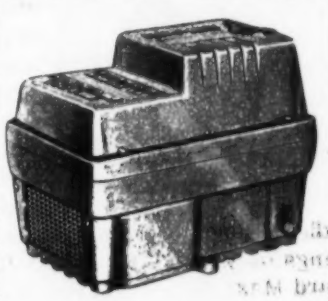
TEST LIGHT-FUSE PULLER
for cartridge fuses up to 100 amp

Combination test light and fuse puller is an improved model made of transparent Tenite high dielectric plastic. Serrated jaws are shaped to hold all cartridge fuses up to 100-amp size. Handles are shaped to fit the fingers and corrugated to prevent slipping. Two 24-in. flexible leads are furnished, one with a 4-in. plastic handle prod and the other with a spring clip with safety rubber jacket. Test light of neon type with resistor meets Navy specifications. Use can be for handling live electrical parts up to 600 v ac-dc. Made by **Holub Industries, Inc.**, 411 DeKalb Ave., Sycamore, Ill.

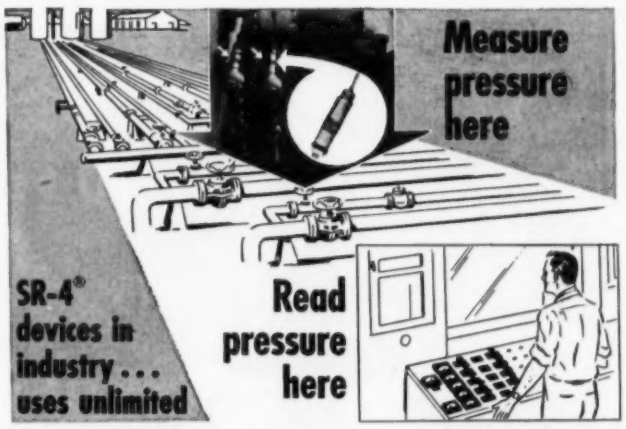
▲ For more details circle NED-143 A4 on enclosed inquiry slip ▲

BILGE PUMP
automatic submerged type

Submerged type electric bilge pump has a capacity of 750 gph, up to 12 ft above pump level, despite the fact that it is less than 6 in. high. The model FSA pump is vaporproof and is designed to run continuously entirely under water. It is powered by a motor with renewable brushes, parts and oil-less bearings. Operation is on 6, 12, 24, 32 or 110 v dc. Pump can be operated manually and automatically. Made by **Sutton Mfg. Corp.**, Dept. NED, 112 W. Wilson Ave., Norfolk, Va.



▲ For more details circle NED-144 A4 on enclosed inquiry slip ▲



THE PLANTATION PIPELINE PROBLEM: Plantation sought a method of remote pipe line pressure control to eliminate their calibration, maintenance and fire problems.

THE BALDWIN SOLUTION: After a year's experience with a test installation Plantation installed 24 completely electronic remote indicating systems using nearly 200 Baldwin SR-4 pressure cells.

Plantation reports that their SR-4 Pressure Measuring systems, in use for a year at 12 dual line pumping stations, have required virtually no maintenance and have greatly reduced personnel required for maintenance of equipment and calibration of instruments. There are four reasons why the SR-4 system is so economical for pipe line control:

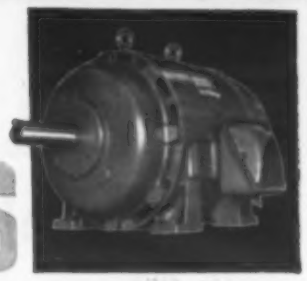
1. Cell capacities range to 1500 psi and overall accuracy is 1% of full scale. **2.** After a full year's service the SR-4 pressure cells agreed with original factory calibrations within 0.2%. **3.** By eliminating small fluid control piping containing inflammable product, the SR-4 system avoids potential fire hazards. **4.** Ruggedly constructed, hermetically sealed, with no moving parts, SR-4 pressure cells make Plantation's sensing system virtually free of maintenance costs.

Investigate the *unlimited uses* for Baldwin SR-4 Devices! For complete information about a multitude of SR-4 applications, *write* Dept. 3130, Baldwin-Lima-Hamilton Corp., Philadelphia 42, Pa.

BALDWIN-LIMA-HAMILTON
Philadelphia 42, Pennsylvania • Offices in Principal Cities
In Canada, Peacock Bros., Ltd., Montreal, Quebec

▲ For more details circle NED-145 A4 on enclosed inquiry slip ▲

"ALL MOTORS ARE NOT ALIKE!"



FOR RUGGED SERVICE, Reliance Motors are built better to last longer. These Precision-Built Motors combine maximum strength with shock-resistant frame and bearing-bracket construction. Write for Bulletin B-2101. B-65

RELIANCE Precision-Built MOTORS

RELIANCE ELECTRIC AND ENGINEERING CO.
1082 Ivanhoe Road, Cleveland 10, Ohio • Sales Representatives in Principal Cities

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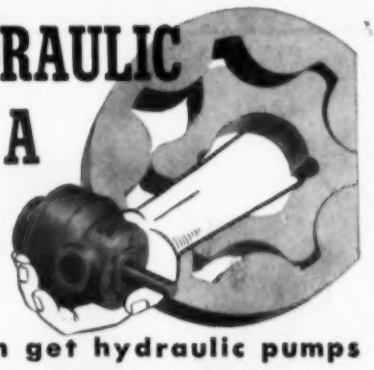
NEED HYDRAULIC PUMPS IN A HURRY?



Now... you can get hydraulic pumps WHEN YOU NEED THEM!

Gerotor can deliver from stock . . . immediately . . . any of their standard hydraulic pumps, covering ranges as shown in the table. If you have pump requirements and need immediate service . . . call, wire or write Gerotor today.

Type Pump	G.P.M. Range	P.S.I. Range	R.P.M.
"B"	4—1.5	0—1000	1800
"QDH"	3—12	0—1200	1200
"O"	20—40	0—1000	1200

Whatever your need in hydraulic pumps or motors, consult the Gerotor May engineers. Write for free literature.

GEROTOR MAY CORP., BOX 86, Baltimore 3, Md.

GEROTOR HYDRAULIC PUMPS & MOTORS

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PLANT MAINTENANCE "MUST"

in one minute PER KEYWAY for as little as ONE PENNY PER KEYWAY

a du Mont *Minute Man*® KEYWAY BROACH KIT for cutting any size keyways you want, from 1/16" to 1", in bores from 1/4" to 3", *by hand, with arbor press*

SEE 'EM at BOOTH 524 PLANT MAINTENANCE SHOW
or clip this coupon

The du MONT CORPORATION, Greenfield, Mass.
Rush new Catalog and price list D—on *Minute Man* Keyway Broaches and Kits, to
Name.....
Company.....
Address.....

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Be Brighter than Competition!...

BETTER FINISHING is your cue! Finer, faster *burring, cleaning, finishing, polishing in one operation* with Brightboy saves time, increases profits. Brightboy produces parts, assemblies and finished products that look and *are* the *better* quality that brings *bigger* sales.

Brightboy definitely brightens your profit picture; gives you a refreshing concept of finishing—applications *beyond* the range of other methods. There are six textures. The combination-action of rubber and abrasive working together not only gives finer surfacing that enables you to out-sell competition, but also *time savings up to 50%*.

BETTER FINISHING DATA is no further away than your regular dealer. Ask him for the Brightboy Catalog Manual: Write us if he cannot supply you, or on any problem where finishing is involved.

WELDON ROBERTS Brightboy RUBBER CUSHIONED ABRASIVES

BRIGHTBOY INDUSTRIAL DIVISION
WELDON ROBERTS RUBBER CO.
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America's Pioneer Manufacturer of Rubber-Bonded Abrasives

FOR FINISHING ALL METALS, PLASTICS, WOOD, GLASS AND LAMINATED MATERIALS

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CAMCAR COLD-FLOW

FOR METAL PARTS REQUIRING METTLE

The mettle of Cold-Flow parts and fasteners has also been proved by the rigid demands of the automotive industry . . . proved in strength, in surface hardness and finish.

And versatile Camcar Cold-Flow has proved its mettle in *all* metals, in all industries. It forms intricate shapes—impractical by other methods—in high and low carbon steels, copper, brass, aluminum and many others . . . in quantities to match automotive assembly.

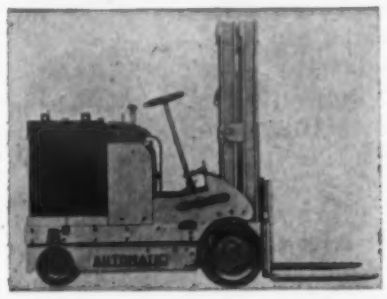
Send requirements, specs and available samples. Or, ask for a Camcar field specialist.

CAMCAR COLD-FLOW

CAMCAR SCREW & MFG. CORP.
ROCKFORD, ILLINOIS
TELEPHONE 5-9451 • TELETYPE RK-8653

▲ For more details circle NED-150 A4 on enclosed inquiry slip ▲

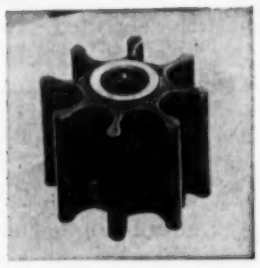
ELECTRIC FORK TRUCKS approved for hazardous locations



Line of electric fork lift trucks with capacities of 2000, 3000 and 4000 lb have been approved by Underwriters' Laboratories for use in hazardous locations involving fire or explosion. Reportedly the first industrial truck so recognized, the HF series of Skylift electric trucks will carry the UL "type EX" label. Trucks are recommended for use in areas and locations covered in Class I, Group D, Division 1 as set forth in the code of the National Fire Protection Association. Made by **Automatic Transportation Co.**, 149 W. 87th St., Chicago 20, Ill.

▲ For more details circle NED-151 A4 on enclosed inquiry slip ▲

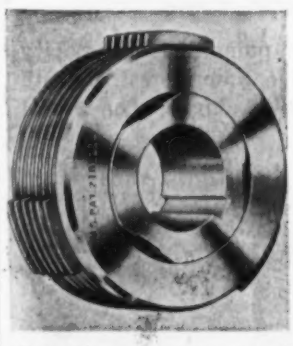
RUBBER PUMP IMPELLER undamaged by foreign bodies



Rubber pump impeller permits passage of foreign body through water or other fluid pump without jamming or breakage. Unit illustrated is designed for washing machines, and has a bonded metal core or bushing. Impeller is also available in pumps either lined with rubber or fabricated completely from rubber for similar but more severe service. Made by **Acushnet Process Co.**, 782 Belleville Ave., New Bedford, Mass.

▲ For more details circle NED-152 A4 on enclosed inquiry slip ▲

CLUTCH DISK ASSEMBLY usable for built-in applications



Self-contained and independent of the actuator, Maxitorq Disc-Pac is designed for use by those who wish to build their own clutches or brakes. Features are springs that prevent drag, abrasion and heating in neutral; and locking plate that locks all disks onto the body. Unit keys to shaft and is easily replaced. Eight disk diameters are available from 2 to 8 in. with ratings of ¼ to 15 hp at 100 rpm. Disc-Pak fits standard Maxitorq driving rings. All assembly, take-apart and adjustments are manual without need for tools. Made by **Carlyle Johnson Machine Co.**, 50 Main St., Manchester, Conn.

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GRIES CUTS COST AND TIME!

NO MINIMUM SIZE! LOW MOLD COSTS
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143 Beechwood Avenue, New Rochelle, N. Y.
Phone NEw Rochelle 3-8600

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• AMERICA'S FIRST WIRE FENCE •

EVERY STEP IS QUALITY CONTROLLED—FROM RAW METAL TO THE ERECTED FENCE

• Page *Chain Link* Fence, pioneered by PAGE and produced only by PAGE, offers reliable protection against hazards which threaten both property and persons.

YOUR CHOICE OF THREE SUPERIOR METALS is assurance that your fence will best meet your needs. Choose heavily-galvanized Copper Bearing Steel, or long-lasting Stainless Steel, or corrosion-resisting Aluminum. Interlocking wires are woven to form a strong, uniformly square mesh.

EIGHT BASIC STYLES, varied by choice of metals, wire gauges, heights, types of gates, posts and post tops, and top rails. Tension and fabric bands not removable from outside. Gate frames welded at joints.

IT'S TIME TO THINK, AND ACT. Page Fence is expertly erected by technically trained firms conveniently located throughout the country. For illustrated PAGE data and name of nearest firm . . .

Write to PAGE FENCE ASSOCIATION in Monessen, Pa., Atlanta, Bridgeport, Chicago, Denver, Detroit, Los Angeles, Philadelphia, New York or San Francisco.

PRODUCT OF PAGE STEEL & WIRE DIVISION OF AMERICAN CHAIN & CABLE COMPANY, INC.

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Select pressure—get uniform, constant hydraulic control

FULFLO

OIL BY-PASS RELIEF VALVES

Standard or Flange Types

NEED NO MAINTENANCE
Precision-engineered to maintain predetermined pressures on ram presses, machine tool hydraulic mechanisms, Diesels and oil-burning equipment.
Trouble-free because built with fewest parts for dependable, quiet, constant performance.

NON-CHATTERING
BRASS OR CAST IRON . . . for pressures from 0 to 500#.
Pipe sizes: ¼" to 2".

Write on your letterhead for professional edition of FULFLO MECHANICAL DATA BOOK

Please state if for Pumps, Valves, or both

FULFLO THE FULFLO SPECIALTIES CO. Inc.
BLANCHESTER, OHIO

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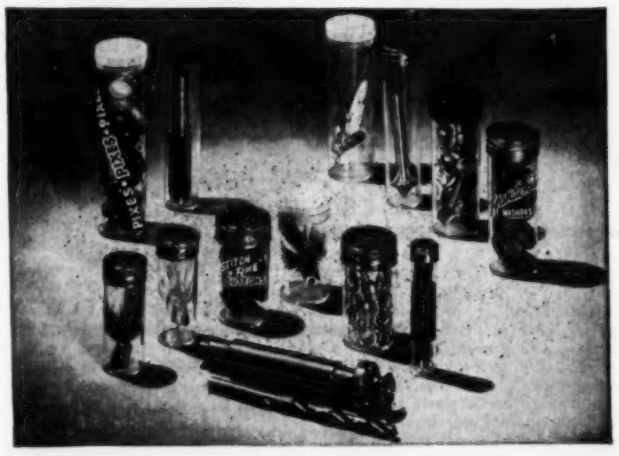

LERMER PLASTIC CONTAINERS . . . unexcelled for tools and small parts

Package your products in Lermer Plastic durable, handsome containers. They are shatterproof, 75% lighter than glass, available clear or opaque in many colors, can be printed or decorated and are available with metal or plastic closures. Write for complete catalog information and samples. If possible, send along products for particular suggestions.

LERMER PLASTICS, INC.
Pioneers and Pacesetters in Plastic Containers
514 South Ave., Garwood, New Jersey

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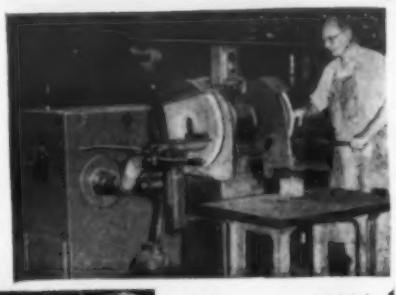
STOP DUST
INSTANTLY WITH **DUSTKOP**

300 cfm to 10,000 cfm standard pre-tested units available in stock

- LOW COST
- IMMEDIATE INSTALLATION
- SAVES HEAT
- PORTABLE



2405 cfm ◀ 1400 cfm ▲

DUSTKOP

WRITE FOR
- RECOMMENDATION about your dust problem. No obligation
- CATALOG 605-2

AGET-DETROIT CO.
202 S. Main St. Ann Arbor, Mich.

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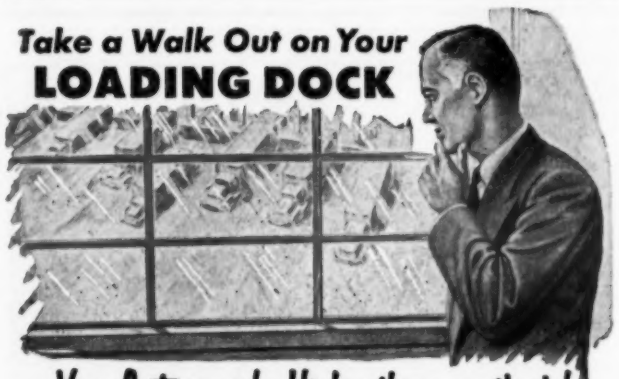
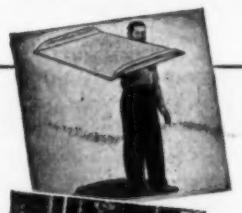
Take a Walk Out on Your
LOADING DOCK



... Your Costs may be Higher than you think!

Your loading dock is a control valve to costs . . . an indispensable gateway to profitable operations! Gear it for smooth, rapid transit between plant and freight carrier by equipping your docks with Magliner magnesium dock boards. Easily handled by one man, Magliner dock boards expedite the flow of materials in and out of loading areas . . . keep shipments moving! They can add substantially to greater loading capacity . . . *without adding to capital expenditure!*

Designed to exact specifications, Magliner dock boards are custom engineered to overcome any normal or unusual loading problems, regardless of location complexities, area size, load to be handled, or equipment used! Of all-magnesium, bridge-design construction, these low cost, high output units combine the amazing lightness . . . the amazing strength of the world's lightest structural metal! They are capacity rated to handle the heaviest load requirements. Get greater returns on your handling dollar! Get the complete story on low-cost Magliners for *your* docks. Write for information bulletin DB-204R.

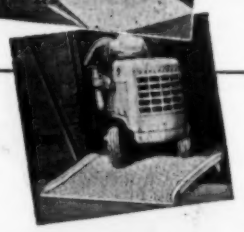


magnesium **LIGHT**

Easily handled by one man! No work-stopping interruptions! Reduces lifting hazards.

magnesium **STRONG**

Bridge-design construction. Capacity-rated to handle the heaviest load requirements.

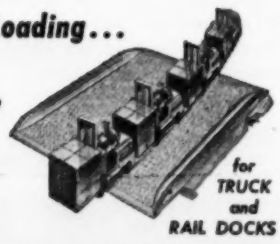


magnesium **SAFE**

Damage-proof safety curbs prevent truck roll-offs . . . eliminate tire damage and curb damage! Positive lock prevents shifting. Assured safety to men and equipment!

For Faster, Lower-Cost Loading...

MagLiner MAGNESIUM **DOCK BOARDS**



Write for Descriptive Bulletin DB-204R

MAGLINE INC., P. O. BOX 392 • PINCONNING, MICHIGAN

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PUNCH PRESS
has 18-station rotary turret

Any shape hole can be punched in metals, plastics, cardboard, fiberboard, leather or other sheet materials on this 18-station rotary turret punch press. The desired punch-and-die set is brought into position instantly by rapid, manual turn of turret and locks into place with perfect alignment. Punch-and-die sets can be made to designs, or are available in scores of round or irregular shapes and sizes up to 2-in. diameter. Made by **Rotex Punch Co.**, 2350 Alvarado St., San Leandro, Calif.

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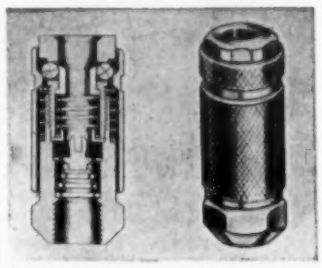
QUICK AIR COUPLER
shuts off air when detached



Permitting air flow of 70 cfm at 150 psi, Quick-Detachable air coupler is compact and weighs only 4½ oz. Coupling and uncoupling is instantaneous with one push or pull, yet unit cannot be detached accidentally. When unit is detached from nipple, flow of air is shut off instantly. Free-swiveling action prevents kinking of hose. Made by **Lincoln Engineering Co.**, 5782 Natural Bridge Ave., St. Louis 20, Mo.

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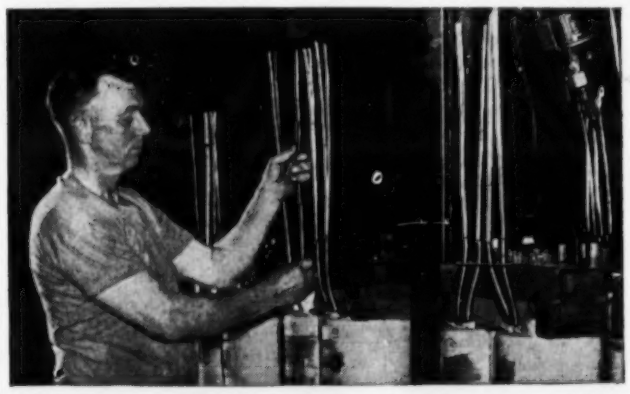
OIL-FILLED CAPACITORS
with small case are easily mounted

Ratings of 8 mfd and dual 4 mfd at 600 v dc, 4 mfd and dual 2 mfd at 1000 v dc and 2 mfd at 1500 v dc are available in small case size inverted tubular oil-filled capacitors. Mounted by a single stud, units have case sizes from 1½ x 2⅞ in. to 2 x 4½ in. They are hermetically sealed, oil-impregnated and filled with Indco oil A for temperature range of −40 to 70° F. Pyroteen filled capacitors are available for temperatures between −70 and 90° F. Made by **Industrial Condenser Corp.**, Dept. N-9, 3243 N. California Ave., Chicago 18, Ill.

▲ For more details circle NED-162 A4 on enclosed inquiry slip ▲



"Stays flexible in hot oil"
says Line Material Company about TEMFLEX 105

Used as a coil tap lead protector, Temflex 105 Tubing withstands contact with hot transformer oil, and does not crack, shrink or distort in service, according to Line Material Company.

Temflex 105 Tubing — product of Irvington — is UL approved for operation in oil at 90° C. and continuous operation in air at 105° C. The same basic formula is now available in tape form also.

Write for data sheets on Temflex 105 Tubing and Tape

LOOK TO IRVINGTON FOR INSULATION LEADERSHIP

IRVINGTON VARNISH & INSULATOR
DIV. OF MINNESOTA MINING & MFG. CO.
14 ARGYLE TERRACE, IRVINGTON 11, N. J.

Plants: Irvington, N. J.; Monrovia, Calif.; Hamilton, Ontario, Canada

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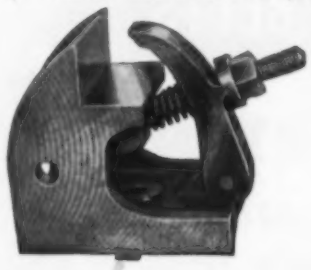
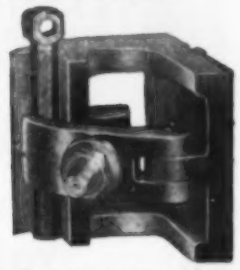
• HART •
MILLING FIXTURES
MASTERS OF 1000 SETUPS

ELIMINATE 1000 NEEDS FOR SPECIAL— AND EXPENSIVE JIGS AND FIXTURES





USED IN VERTICAL POSITION

HART MILLING FIXTURES make themselves popular and profitable in any shop—are used in either horizontal or vertical position. Will hold round, hexagonal, octagonal, or square stock, aligning the work with the machine. Grip holds the work on bottom as well as on back. Generally sold in pairs. Made in 4 sizes—to hold stock from ½ to 5 inches.

Write for new bulletin.

WALTER W. FIELD & SON INC.
39 HAYWARD STREET, CAMBRIDGE 42, MASS.

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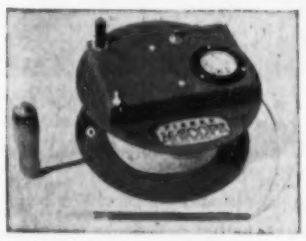
free! NEW **FISHER** CATALOG

☐ PIPE FINDERS ☐ LEAK DETECTORS



☐ WELL TESTERS ☐ METAL LOCATOR

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Fisher RESEARCH LABORATORY INCORPORATED PALO ALTO CALIFORNIA

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Do You REALLY Know The Facts About Laminated Plastic Tubing?

Do you know when to use laminated tubing? Whether to use "rolled" or "molded" tubes . . . which grade will best fit *your* application? Are you familiar with the variety of rods and tubular shapes—such as channels, angles, squares, ovals, polygons—which are available? Do you know that laminated plastic tubing is an excellent insulation, mechanically strong, tough, dense, light in weight, resists heat, water, corrosives, oils, solvents?

To get the answers to these and other questions you may have about laminated plastic tubing, use the coupon below for your copy of the SYNTHANE Tubing Catalog.

SYNTHANE

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SHEETS
RODS • TUBES
MOLDED-LAMINATED
MOLDED-MACERATED
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SYNTHANE CORPORATION
N.E. River Road, Oaks, Pennsylvania

Gentlemen:
Please send me the SYNTHANE Tubing Catalog.

Name_____
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City_____ Zone____ State____

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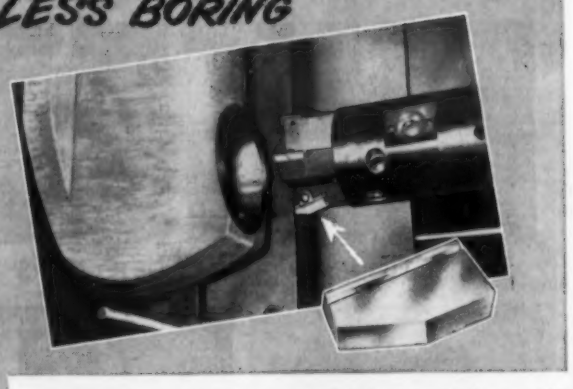
How to make A BORING JOB LESS BORING



Time, cost, and trouble were minimized in boring a 4.7" diameter hole in cast iron saw arms by these tooling changes:

A standard tool Style C-12 was replaced by a special boring head having four standard clamped-on Kennametal inserts Style H6, Grade K6. Speed was increased 20% and feed doubled. Boring time was reduced 60%.

Before any tool sharpening was needed about 250 pieces had been bored. After six regrinds the inserts were advanced, this procedure being repeated until half of their length was utilized. Stubs were salvaged for tips on brazed tools.

Total life per set of inserts was 12,500 pieces — unit tool cost only 1/5c. Obviously the job was less troublesome.

Although your machining problem is different, it also might admit improvement by use of Kennametal tooling. Our Tool Engineers will be glad to help. Kennametal Inc., Latrobe, Pa.

KENNAMETAL®
CEMENTED CARBIDE TOOLING THAT INCREASES PRODUCTIVITY

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ELMIRA, N.Y.

COLLETS and FEED FINGERS
PERFORMANCE... ECONOMY

Collets and Feed Fingers for all makes of Automatics, Chucking Machines and Turret Lathes through a single source of supply. Get the benefit of more than 60 years of manufacturing experience—specify HARDINGE Collets and Feed Fingers.

HARDINGE BROTHERS, INC., ELMIRA, N. Y.

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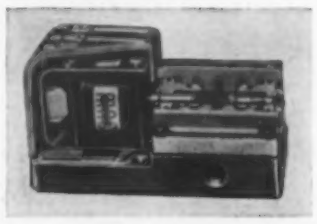
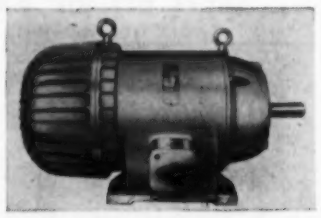
FOUR-WAY AIR VALVE
solenoid frame is cushioned



Floating C-frame of the Macsolenoid four-way air valve is cushioned in shear-loaded Hy-car rubber inserts and has no metal-to-metal contact with the stationary outer bracket. Excess energy of the plunger on closing impact is absorbed by this design. The four mounting screws are also isolated from vibration. Valve has one moving part and all internal passages are as large or larger than the inside diameter of pipe size. From 400 to 500 cycles per minute are possible. Made by **Mechanical Air Controls, Inc.**, 10030-A Capital Ave., Oak Park, Detroit 37, Mich.

▲ For more details circle NED-170 A4 on enclosed inquiry slip ▲

FAN-COOLED MOTOR
in ratings from 15 to 30 hp



High-velocity internal cooling fan incorporated in line of 15 through 30-hp motors provides sufficient cooling capacity to permit higher horsepower ratings to be obtained from smaller frame sizes. Photo shows 30-hp unit, which ordinarily requires No. 365 frame, built into No. 326 frame. Fan measuring 13-in. diameter by 5⅞ in. wide is mounted on motor shaft and is housed within fin-type endbell. All units feature dripproof construction and can be furnished with either single-end shaft or hydraulic pump mount endbells. Made by **Reuland Electric Co.**, Mission & Fremont, Alhambra, Calif.

▲ For more details circle NED-171 A4 on enclosed inquiry slip ▲

FORK TRUCKS
for outside or rough-surface work

Travel speed of 14 mph is feature of the low cost gasoline powered Yardloader fork truck with a 4000-lb capacity. Developed for outside or rough-surface work, truck has large pneumatic tires, 5-in. ground clearance, heavy drive axle and oscillating trail axle. It has a standard lifting height of 122 in. Overall length, excluding forks, is 100½ in., wheelbase is 55 in. and turning clearance is 92 in. Hydraulic system is of low pressure type. Made by **Baker-Raulang Co.**, Baker Industrial Truck Div., 1245 W. 80th St., Cleveland 2, O.

▲ For more details circle NED-172 A4 on enclosed inquiry slip ▲

▲ For more details circle NED-173 A4 on enclosed inquiry slip ▲

For Dependable Flow Control!

THE DAVIS NO. 60 FLOAT VALVE

... use

DAVIS FLOAT VALVES

ENGINEERS interested in working out efficient, trouble-free fluid level and flow control hookups will find a wide choice of units offered in the Davis line of float valves, float boxes, and fluid control valves. For Float Valve dependability the Davis No. 60 is unexcelled. Here are a few of its outstanding features:

1. The Famous Davis Single-Seat Pilot Stem Valve! Tight-closing and non-sticking. Standard sizes will open against any pressure up to 125 lbs.
2. No internal packing! Disc renewable easily and economically. Hot or cold liquid at high or low pressure handled without hunting or water hammer.
3. Sizes 3" and smaller are all-brass valves. Larger sizes have semi-steel body, bronze bonnet, piston and trim. Globe or angle body patterns. Send for Bulletin 101-B.

Davis
DAVIS REGULATOR COMPANY

2531 South Washtenaw • Chicago 8, Illinois

▲ For more details circle NED-174 A4 on enclosed inquiry slip ▲

Announcing... a New addition to our popular line of SELECTIVE FEEDING DEVICES

NOW! A FEEDING UNIT FOR ALMOST ANY SPECIFIC APPLICATION!

Also EXTENDED ENGINEERING SERVICE— ENABLING US TO DO THE COMPLETE TOOLING FOR YOUR INDIVIDUAL FEEDING OPERATIONS

New!

DPS BOWL-FEEDER

A proved method based on the VIBRATORY PRINCIPLE. Provides fully automatic, oriented, single line feeding to Grinding, Packaging, Inspecting and many other automatic machines and operations. Will scientifically feed light, fragile parts that normally could not withstand tumbling.

DPS BARREL-FEEDER

For years our popular unit, successfully used in thousands of plants to help speed production and reduce costs. They were designed with the idea of simplicity in operation and maximum feeding, handling a wide variety of parts. Designed for constant operation.

Write Us—GIVE DETAILS AND LEARN HOW OUR TRAINED ENGINEERS CAN SUPPLY THE ANSWER TO YOUR FEEDING REQUIREMENTS

DETROIT POWER SCREWDRIVER CO.
2819 W. FORT ST. DETROIT 16, MICHIGAN

▲ For more details circle NED-175 A4 on enclosed inquiry slip ▲

GREATER BORE CAPACITY
than other leading makes

New Link-Belt Geared Flexible Couplings are often smaller, lighter, lower cost for a given shaft size

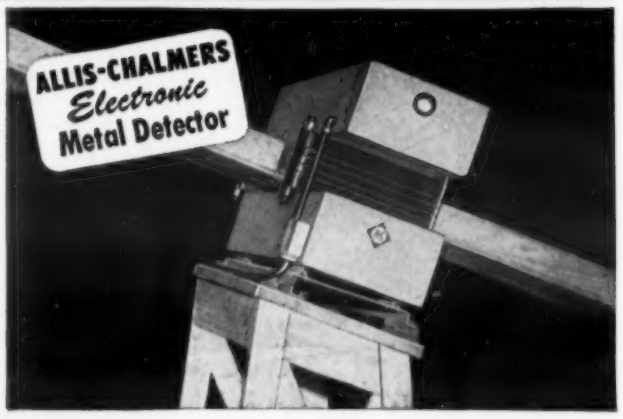
THE compactness of Link-Belt's new geared flexible coupling is accomplished with no sacrifice of load capacity. It is easy to assemble and disassemble, even in limited space. An Allen wrench is the only tool required. Other advantages: Positive lubricant retention, provision for parallel and angular misalignment with minimum backlash. 13,404

Ask your nearby Link-Belt office or distributor for Folder 2375, or write Link-Belt Company, 220 S. Belmont Ave., Indianapolis 6, Ind.

LINK-BELT

GEARED FLEXIBLE COUPLINGS

For more details circle NED-176 A4 on enclosed inquiry slip



ARE YOU SURE IT'S PURE?

CAN YOU BE SURE no metal particles are getting into your packaged food? Magnets can't stop lead or brass or aluminum. The answer is, you *can't* be sure — without an Electronic Metal Detector. There's no other practical way!

Best of all, Allis-Chalmers Electronic Metal Detectors fit production set-ups. For example, conveyor belts from packaging machines can carry packages through the aperture of the detector at 15 to 600 fpm. Unit compares in upkeep and operating cost with a household radio. Latest design minimizes maintenance.

Call your nearby Allis-Chalmers Office for complete information, or write Allis-Chalmers, Milwaukee 1, Wisconsin.

A-3711

ALLIS-CHALMERS A-C

For more details circle NED-177 A4 on enclosed inquiry slip

SW-42 Double DUALOC Grommet Has a Wide Variety of Uses

• The ACCO *Registered* Double DUALOC Grommet is made of cable-laid wire rope. All-steel construction with flexibility comparable to manila. Spliced section placed over hook doubles bearing surface and increases sling life. The double DUALOC makes this the strongest grommet obtainable, size for size. Yet cost is lower than for ordinary types.

Can be used in vertical, basket, and choker hitches. Proof-tested and warranted at 5 to 1 safety factor. Sizes from 9/32" to 1½" diameter, any circumference.

See your ACCO *Registered* Wire Rope Sling Distributor

ACCO *Trade Mark. Patent No. 2461079
In Canada: Dominion Chain Co. Ltd. Niagara Falls, Ontario

WIRE ROPE SLING DEPARTMENT
AMERICAN CHAIN & CABLE

Wilkes-Barre, Pa., Chicago, Denver, Houston, Los Angeles, New York, Odessa, Tex., Philadelphia, Pittsburgh, San Francisco, Bridgeport, Conn.

ACCO Registered DUALOC Slings

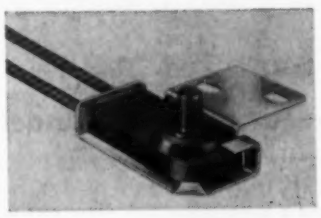
For more details circle NED-178 A4 on enclosed inquiry slip

HAND BLOW TORCH
for light soldering, brazing jobs

A disposable fuel tank is feature of this hand model LP blow torch designed for soldering, light brazing, and similar jobs where heavy duty equipment is not required. Special features include factory-set pressure relief valve, wide-range positive flame adjustment and I.C.C.-approved heavy-gage tank for stability and easy handling. Available accessories include heavy-duty burner, pointed soldering tip, chisel point soldering tip and flame spreader. Made by **Turner Brass Works,** Sycamore, Ill.

For more details circle NED-179 A4 on enclosed inquiry slip

WATERPROOF SWITCH
plunger type with one-piece bracket



All working parts of the No. 201209 molded plunger switch are waterproofed. Small rubber plunger shown in illustration can be fabricated to the customer's specifications. Overtravel is an inherent characteristic of this plunger. Bracket is of one-piece stainless steel construction. Switch is available in single-pole, single-throw or single-pole, double-throw types. Waterproof covering can be made of vinyl, neoprene or silicone. Made by **Control Products, Inc.,** 306 Sussex St., Harrison 12, N. J.

For more details circle NED-180 A4 on enclosed inquiry slip

DISPOSABLE WORK CAPS
made of chemical resistant paper

Made of heavy Kraft paper which has been treated with DuPont neoprene synthetic rubber, this disposable work cap is water repellent, is treated with a flame retardant and is resistant to most acids and alkalies. It does not readily collect dust, is light in weight and holds its shape well. Low in cost, it has a leatherette sweat band around the inside and a reinforced visor. Available from **Record Industrial Co.,** Dept. NE, 3301 Arch St., Philadelphia 4, Pa.

For more details circle NED-181 A4 on enclosed inquiry slip

EXPANDING RUBBER SEALER

Expands 60% to 125% When Subjected to Heat

Shown above is sealer in form of U-shape gasket used, for example, to seal around windshield wiper pivot post hole of automobiles.

To effectively seal uneven or irregular gaps and hard-to-reach places, Presstite's expanding rubber compounds are ideal. When subjected to heat, they are designed to expand and *remain* expanded, developing excellent adhesion. Furnished in extruded beads, ribbons and special shapes or cutouts as required, they form an impenetrable barrier against water, air, dust and rust.

Write for samples of Presstite expanding rubber sealers today . . . or tell us your sealing needs. Over 400 Presstite sealing compounds are used in thousands of sealing applications, and we'll gladly recommend the very best sealant for your job.

SEALANTS • COATINGS • ADHESIVES

for Automotive, Appliance, Refrigeration, Construction and many other industries.

PRESSTITE SEALING COMPOUNDS

In Canada: Railway & Power Engineering Corp., Ltd.

PRESSTITE ENGINEERING COMPANY

3742 Chouteau Ave. St. Louis 10, Mo.

For more details circle NED-182 A4 on enclosed inquiry slip

NICHOLSON MAKES

FREEZE-PROOF Steam Traps
for Every Plant Use

Because they drain completely when cold, these four types of Nicholson steam traps are positively freeze-proof. Can be freely installed outdoors. Universally recommended for use in lines which need not be in continuous use during cold weather, because they are freeze-proof and because their 2 to 6 times average drainage capacity results in minimum heat-up time. The non-air binding feature of Nicholson traps also notably facilitates heat transfer in severe weather. Size ¼" to 2"; pressure to 250 lbs.

BULLETIN 853
162 Oregon St., Wilkes-Barre, Pa.

W. H. NICHOLSON & CO.

TRAPS · VALVES · FLOATS

For more details circle NED-183 A4 on enclosed inquiry slip

PRODUCTION BORING with E-Z SET by Maxwell

Only the MAXWELL E-Z Set boring tools feature high speed operation, micrometer-like adjustment to 0.0001-inch and maximum boring range.

Interchangeable shanks permit E-Z Set boring tools to be used in turret lathe, jig-bore, milling machine, boring mill, automatic or other machine tools. Because they can be adjusted for cut in only one-tenth the time formerly required by similar tools, these Maxwell-made tools can meet high-speed production on schedules.

E-Z Set boring tools are available in three models having maximum boring bar capacities of ½, 1 and 1½ inches and covering a boring range of from ⅜ to 20 inches.

Write today for catalog.

999-MC

THE MAXWELL COMPANY

390 Broadway • Bedford, Ohio

For more details circle NED-184 A4 on enclosed inquiry slip

DO THIS If You Want to STOP LEAKS

. . Seal Out Dampness in Basement Walls!

Leaks in concrete walls, masonry, cinder block, etc., can be stopped quickly with FLEXTITE. Actually seals against water pressure. Efficient as a trowel coat for sealing off water and dampness. Transforms leaky basement walls into dry surfaces. (Minimum quantity 6 gallons)

USED IN
- ELEVATOR PITS
- TUNNELS, DRAINS
- WATER TANKS
- RETAINING WALLS

MAIL COUPON FOR TRIAL OFFER

FLEXTITE

FLEXROCK COMPANY • *Offices in Principal Cities*
3603-F Filbert St., Philadelphia 1, Pa.
Please send me complete FLEXTITE information and details of TRIAL ORDER PLAN—no obligation.
Name ..... Title .....
Company .....
Address .....

For more details circle NED-185 A4 on enclosed inquiry slip

Lacquer-Stik

a Wipe-on for quick permanent coloring of stampings, engravings, symbols and designs

For use on metal, glass, ceramics, plastics

Permanent marking of stampings, engravings and designs is made easy by the use of Lacquer-Stik. Just apply—wipe off excess . . . and you have a permanent mark. Used for marking radio and television dials, knobs on stoves, graduations on instruments, etc.

8 colors to choose from

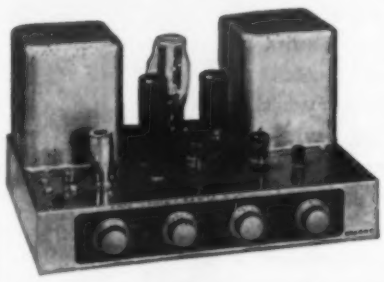
WRITE FOR SAMPLE.

LAKE CHEMICAL CO.
3053 W. Carroll Avenue, Chicago 12, Illinois

For more details circle NED-186 A4 on enclosed inquiry slip

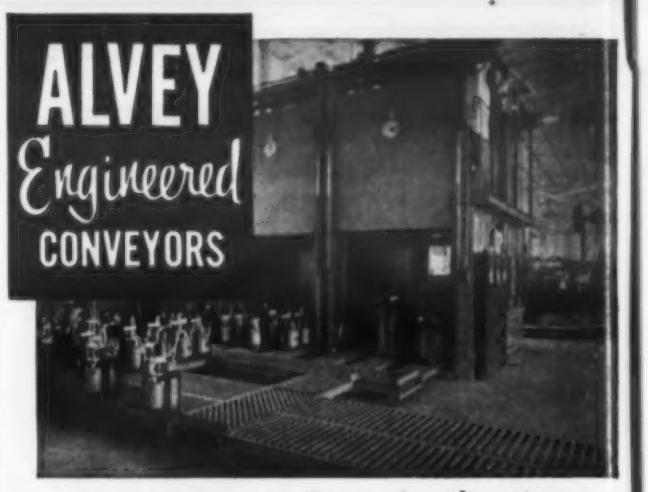
HIGH-FIDELITY AMPLIFIER
provides pure wide-range response

Harmonic and intermodulation distortions of less than 1 and 2 per cent, respectively, are featured by the Golden Knight 24-w high fidelity amplifier, practical for industrial paging systems, laboratory testing and other applications requiring pure wide-range response. Frequency at 24-w output is ±0.75 db from 20 to 40,000 cps. Unit has four inputs, one for any high impedance microphone; two for radio tuner, crystal cartridge, television or tape recorder; and the last for G-E, Pickering or Audak magnetic cartridges. Added features include three-position record equalizer for flat playback or equalization for NARTB or AES recording curves and adjustments for bias, balancing out hum and balancing output tubes. Made by **Allied Radio Corp.**, Dept. NED-753, 100 N. Western Ave., Chicago 80, Ill.



For more details circle NED-188 A4 on enclosed inquiry slip

ALVEY Engineered CONVEYORS



Ease the Handling of Materials in Process

Alvey Conveyors can smooth out and synchronize the flow of materials and parts in manufacturing operations. An Alvey Engineer will be glad to visit your plant to help you determine how you can save time and money and improve production in your plant. Write for additional information.

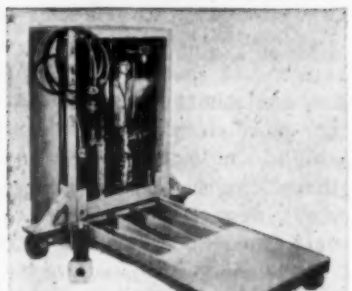
ALVEY CONVEYOR MFG. CO.
9259 Olive Street Road • St. Louis 24, Missouri
Branch Offices in Principal Cities

ALVEY 125

For more details circle NED-192 A4 on enclosed inquiry slip

SKID LIFT TRUCK
electrically powered hydraulic model

Capacities of 2000 and 3000 lb are offered in line of Samson hydraulic skid lift trucks. Skid loads will remain in any position when the electric motor is shut off. Truck has an overall length of 60 in., width of 24 in. and height of 44½ in. It is equipped with a ¾-hp, three-phase, 60 cycle, 208-220-440 or 550-v electric motor and a 15-ft cord with polarity wire. Lowered height is about 7 in. and elevated height is 34 in. About 1 minute is required to attain maximum elevation. Truck moves on two ball bearing swivel casters and three solid wheels and weighs 650 or 750 lb, depending upon capacity. Made by **General Sales & Engineering Co.**, 7356 N. Clark St., Chicago 26, Ill.



For more details circle NED-189 A4 on enclosed inquiry slip

CORRECTION

In the description of the Loxswitch 6-amp single-pole double-throw limit switch (*NED*-551 *M3, Dec.* '53) it was erroneously stated, "With 20 per cent overtravel, units have tested 20 000,000 operations." This should have read "With 20-*degree* overtravel ——". This switch is made by R. B. Denison Mfg. Co., Dept. N, 4220 Hough Ave., Cleveland 3, O.

For more details circle NED-190 A4 on enclosed inquiry slip

Dependable MEASURING & CHECKING EQUIPMENT

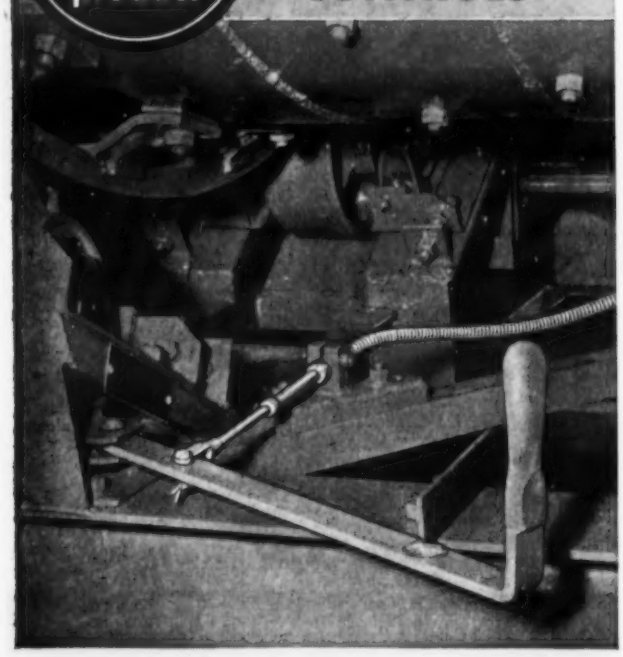
We also build jigs, fixtures, special tools and machinery. Send us your blueprints.

MACHINE PRODUCTS CORPORATION
6771 E. McNichols Rd. Dept. B Detroit 12, Mich.

For more details circle NED-193 A4 on enclosed inquiry slip

an ACCO product

TRU-LAY PUSH-PULL CONTROLS



Snake into Tight Spots

• The TRU-LAY Push-Pull Control illustrated above is on a No. 835 Barber-Greene hot mix dryer. The outside control lever is readily accessible and the PUSH-PULL snakes around obstructions into a tight spot where it engages a clutch.

Flexibility of TRU-LAY Push-Pulls makes them easy to install. This is but one of hundreds of examples of how TRU-LAY Push-Pulls can eliminate the time you would spend designing, making and installing complicated rigid parts. Push-Pulls are ruggedly built, carry their own lubrication and are sealed against dirt and moisture. Capacities up to 1000 pounds input.

If you have a problem in remote control, write our Detroit office today for a copy of DH-287

TRU-LAY PUSH-PULL CONTROLS

ACCO
AUTOMOTIVE AND AIRCRAFT DIVISION
AMERICAN CHAIN & CABLE
601 Stephenson Bldg., Detroit 2
2216 So. Garfield Ave., Los Angeles 22 • Bridgeport 2, Conn.

For more details circle NED-187 A4 on enclosed inquiry slip

OUT OF THIS WORLD!

THE AIR MASTER keeps dust and grit out of your plant . . . instantly sucks them from the whirling wheels of your grinders and buffers. Dust and grit, tiny but destructive enemies of health and machinery, are completely eliminated right at the moment they fly off the wheels.

The AIR MASTER keeps the air clean. It provides healthful working conditions for your employees . . . keeps expensive machinery in working order by protecting delicate bearings and moving parts.

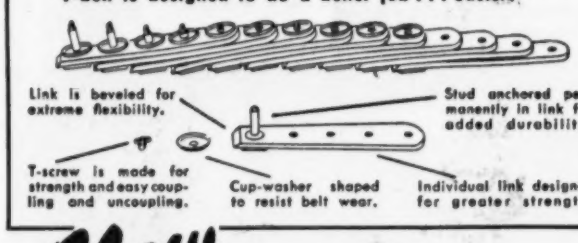
Install the AIR MASTER in your plant. It is fully self-contained . . . efficient, rugged, dependable. A size for every grinder and buffer.

WRITE TODAY FOR COMPLETE DETAILS

The Cincinnati
ELECTRIC DRILLS • GRINDERS
BUFFERS • PORTABLE TOOLS
AIR MASTER DUST COLLECTORS
THE CINCINNATI ELECTRICAL TOOL CO.
Division of THE R. K. LeBLOND MACHINE TOOL CO.
Dept. 54-RD Madison & Edwards Rds. Cincinnati 8, Ohio

For more details circle NED-191 A4 on enclosed inquiry slip

This detailed line drawing of the new, patented Veelos TD and TE v-belt makes it easy to see how this new v-belt is designed to do a better job . . . easier!



New VEELOS
TD and TE Adjustable V-belt for D and E Drives

It installs in minutes. Links are quickly joined by easy-to-use cup-washers and T-screws to make up individual belts.

It lasts for years. New high-tensile strength link combined with new stud, cup-washer, and T-screw gives added durability.

VEELOS IS KNOWN AS VEELINK OUTSIDE THE UNITED STATES.

Get the complete story of this new v-belt for D and E drives. Send now for new 8-page illustrated catalog.

VEELOS THE LINK V-BELT

MANHEIM MANUFACTURING & BELTING CO.
650 Manbel St., Manheim, Pa.

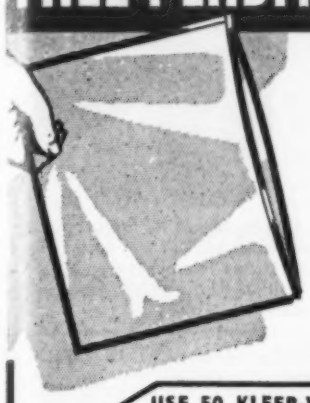
Adjustable to Any Length • Adaptable to Any Drive

For more details circle NED-194 A4 on enclosed inquiry slip

WANTED

5000 MORE PLANT MANAGERS TO ASK FOR

FREE PLASTIC ENVELOPE



TO PROTECT JOB-TICKETS

Ask for your FREE plastic envelope that'll keep your work-records clean and readable . . . Don't gamble with dirty fingerprints. And don't let a grease spot raise havoc with your instructions.

USE 50 KLEER-VU ENVELOPES AT OUR RISK

Order now 50 transparent job-ticket envelopes, 10" x 12½", to reduce errors and speed production . . . If not 1000% satisfied, return envelopes at our expense, and tear up invoice totaling $10.

AMERICAN KLEER-VU PLASTICS, INC.
53-06 Grand Ave. Maspeth 78, N. Y.

For more details circle NED-195 A4 on enclosed inquiry slip

Move Air or Fumes ECONOMICALLY with new PORTOVENT* Ducting

Available in sizes 4 in. ID to 36 in. ID

11 in. diameter PORTOVENT extended and compressed.

This new spiral-wire reinforced ducting has many features which can mean savings in time and money.

First cost is low. Portovent is easy to connect and install. It can be cut to any length on the job with no weakening or raveling, because it has fully bonded seams. Portovent has excellent lengthwise compressibility . . . is easy to transport and store . . . maintains large sections on sharp bends . . . has excellent air flow characteristics.

Portovent is made with Nylon base (Type SY) or cotton base (Type SC). Both are impregnated with age-resisting Neoprene compound.

Write today for details on this new Portovent Ducting.

*Trade-marks

THE FLEXAUST COMPANY
Dept. NE-1 100 Park Avenue, New York 17, N. Y.
Formerly American Ventilating Hose Co.

FLEXAUST* PORTOVENT* BLOFLEX*

For more details circle NED-196 A4 on enclosed inquiry slip

May We Serve You?

You will find our experience in WHEEL IMPROVEMENT a treasure store for you in your search for MOBILITY at its BEST. We offer you—

DESIGN of WHEELS and HUBS
DESIGN of SPINDLES and AXLES
SELECTION of Adequate BEARINGS
SELECTION of Suitable Closure SEALS
SELECTION of Sizes, Types, Rubber TIRES

—in ONE Engineered Package

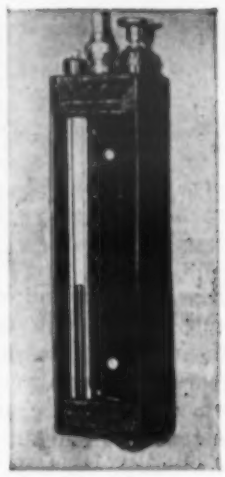
Our PACKAGE PLAN can save you Research, Development, Tooling Costs. We Invite Your Inquiries.

INTEGRATED ENGINEERING — WHEEL BUILDERS for AGRICULTURE & INDUSTRY — Since 1888

FRENCH & HECHT DIVISION
KELSEY-HAYES WHEEL COMPANY
DAVENPORT, IOWA

For more details circle NED-197 A4 on enclosed inquiry slip

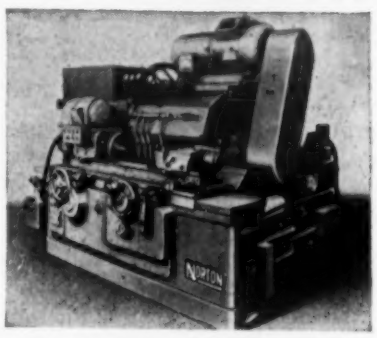
REMOTE TANK GAGE has four different scales



Fluid depth in vented fuel oil, gasoline and diesel oil tanks up to 9 ft deep can be indicated remotely at any reasonable distance and at any desired elevation by the Keco tank gage. Gage shows depth in inches and is equipped with four different scales to permit use with fuel of a wide range of API gravities. Only one scale is visible at one time. Operating as a frictionless hydrostatic balance, gage measures 8½ x 2¼ x 2¼ in. and has a molded nylon case. Made by **King Engineering Corp.**, P. O. Box 315, Ann Arbor, Mich.

For more details circle NED-198 A4 on enclosed inquiry slip

HEAVY DUTY GRINDER is multiwheel semiautomatic type



Heavy duty semiautomatic type CM-1 multiwheel grinder is designed for grinding parts with multiple diameters such as crankshafts in a single automatic plunge-grind cycle. Multiple wheels are carried on the 12-in. diameter spindle to a maximum overall span of 30 in., including spacing collars. Wheel ways are 74-in. long. Wheel change is facilitated by a device which swings back combined wheel guard and wheel drive motor mount and can be made without disturbing cartridge bearing adjustments. Machine has hydraulically operated truing device and automatically compensates for reduction in wheel diameter. Both grinding and truing cycles can be controlled manually if desired. Machine is designed to permit automation arrangements. Built-in swarf remover is optional feature. Made by **Norton Co.**, 200 New Bond St., Worcester 6, Mass.

For more details circle NED-199 A4 on enclosed inquiry slip

DO YOU KNOW? "5000 Years of Forging" is a 20-minute 16-mm sound film which is available for free showing to industrial and trade groups. It deals with the history and mechanical progress of forging from its use by the primitive man to today's modern techniques. Present-day methods which apply pressures up to 1600 tons to form parts having extremely close tolerances are depicted. Copies of film are available on loan from Utica Drop Forge & Tool Corp., 2500 Whitesboro St., Utica 4, N. Y.

For more details circle NED-200 A4 on enclosed inquiry slip

PROTECTS highly polished surfaces!

MYSTIK BRAND • SELF-STIK

Protecto-Mask

Protects Stainless Steel • Aluminum • Plastics Glass • Metals and Materials of all Kinds

This *self-stik* "skin" applies easily from the roll—provides a tough, scratch-proof covering during all processes—fabricating, handling, shipping, storage—then peels off clean. Cuts costs, speeds production, eliminates costly refinishing and replacements. Can also be used for layout and diagramming. Write on your letterhead for information and sample. Mystik Adhesive Products, 2657 North Kildare Avenue, Chicago 39.

Trademark Mystik Registered ©1953 Mystik Adhesive Products

For more details circle NED-201 A4 on enclosed inquiry slip

NEW SUBMERSIBLE SUMP PUMP

12½" high
10" dia.
40 lbs.

MODEL 54, bronze fitted, for portable or stationary service—continuous or intermittent duty. ⅓ h. p. motor, G. E. components, has built-in overload protection—sealed motor and switch parts—permanently lubricated bearings. Actuated by reliable automatic heavy-duty controls—no diaphrams. Can be operated manually. Positive priming at all times. Many other features. Wide application.

Added to regular PENBERTHY line

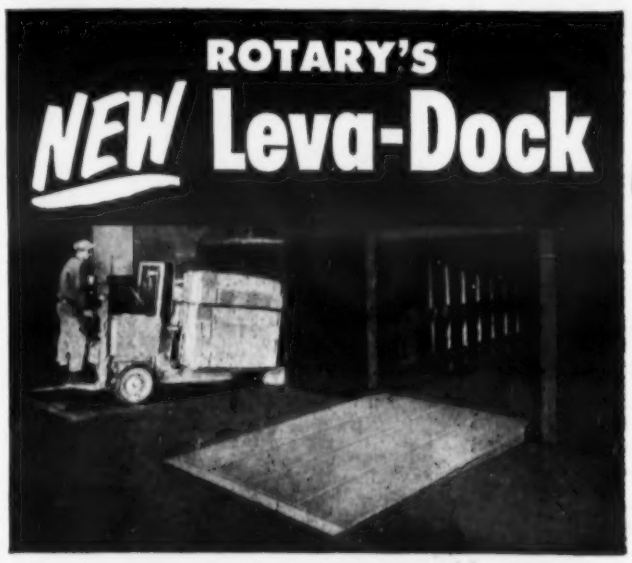
3 models, 7 sizes of automatic electric sump pumps by the oldest and largest producer. Equipped with automatic, trouble-free features. Known for dependability. Write for complete details.

PENBERTHY INJECTOR COMPANY
Division of the Buffalo-Eclipse Corporation
1242 Holden Avenue, Detroit 2, Michigan
Established 1886

There's Certain satisfaction in PRODUCTS BY PENBERTHY

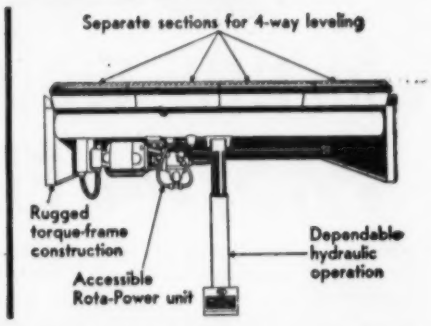
• EJECTORS • EDUCTORS • EXHAUSTERS • SYPHONS • JET PUMPS • INJECTORS

For more details circle NED-202 A4 on enclosed inquiry slip



Adjustable hydraulic ramp for loading docks

- Low cost
- Simple installation
- Easy maintenance
- Assured Safety
- 4-way leveling



■ **Faster, Safer Loading**—Hundreds of material handling men were interviewed, thousands of loading docks checked before the new LEVA-DOCK was designed and engineered. It's Rotary's practical, economical answer to the loading dock problem.

This new automatic ramp compensates 4 ways for varying truck bed heights, out-of-level trucks, and truck spring deflection. Power trucks move quickly, safely in and out of trucks or trailers. A new automatic safety device prevents accidents and costly delays.

The Leva-Dock is a rugged, self-contained unit with oil reservoir mounted in torque-tube frame. All piping and wiring done at the factory except power leads and control wires. Installation costs are cut to the bone.

Mail the coupon and we'll show you how to make big savings at your loading dock.

Rotary Leva-Dock

MAIL FOR COMPLETE DATA
Rotary Lift Co.
1155 Kentucky, Memphis 2, Tenn.
Send information on the LEVA-DOCK to:
Name .....
Address .....
..... State .....
City .....

For more details circle NED-203 A4 on enclosed inquiry slip

BIG NEWS!

Both *Inch-Pound* and Foot-Pound Models of Amazing PROTO Torquer Now Available!

Announced in January! Over 30,000 bought by March 31!! That's the whirlwind success story of the sensational PROTO torque-*limiting* wrench. In addition to foot-pound models, you can now buy *inch-pound* styles and these handle thousands of jobs. Buy the model you prefer from your PROTO dealer today! Send 10¢ for 68-page catalog of entire line to

PLOMB TOOL COMPANY
2275Z Santa Fe Avenue
Los Angeles 54, Calif.

Fastest Torquer in the World!
* Automatic Torque-Limiting Release
* NO Dials, Scales or Pointers to Watch or Break
* Ratchet Head Models Save Time
* Accurate Micrometer-Type Adjustment
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5383

Eastern Factory: Jamestown, N.Y.
Canadian Factory: London, Ont.

PROTO TOOLS
PROTO means PROfessional TOols

▲ For more details circle NED-204 A4 on enclosed inquiry slip ▲

NOW

with NEW WOLLENSAK *FASTAX* FILM*

*DuPont Type 931

•High-speed photographers, exposing up to 16,000 frames per second, have long sought increased exposure speeds with a minimum of grain. At last, this "speed-grain" problem has been met with the new Wollensak FASTAX Film—DuPont Type 931 Rapid Reversal Pan.

Actual camera tests by FASTAX crews throughout the country showed that "931" had doubled the speed of commercially available high-speed films. Faster emulsion makes possible shooting at higher speeds both indoors and out. Or, it permits stopping down another stop, thereby increasing depth of focus more than is possible with any standard commercial film.

Wollensak FASTAX Film is made especially for Wollensak by DuPont Photo Products Division. It is perforated to FASTAX standards (ASA) . . . can be developed as a negative or as a reversal . . . has been developed up to temperatures of 150°F.

Try some in your high-speed camera today. See for yourself its wide latitude . . . longer tonal range, pinpoint gradation. It helps insure faster, better coverage on *every* assignment. Type 931 film is available in 35mm size for high-speed motion picture and recording cameras. **WRITE** for new bulletin.

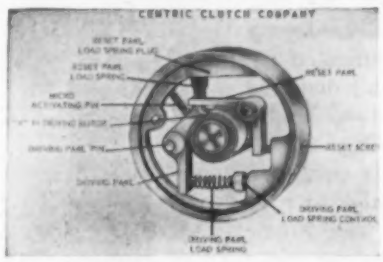
WHEN BETTER FILMS ARE DEVELOPED Wollensak WILL SUPPLY THEM

Wollensak
OPTICAL COMPANY ROCHESTER, N.Y.

• RAPTAR
• RAPAX
• FASTAX
• MIRROTEL

▲ For more details circle NED-205 A4 on enclosed inquiry slip ▲

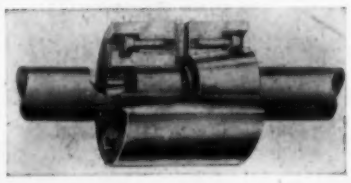
SAFETY CLUTCH prevents power drive overloads



Instantaneous trigger action in torque limitation is featured in the overload Trig-O-Matic clutch. Intended to eliminate overloads and to reduce downtime in power drives, unit is suited for speeds as low as 1 rpm as well as for high speeds. It is adaptable for such driving arrangements as sprockets, pulleys, belts and gears. Disengagement is positive when a predetermined overload occurs and must be reset for operation to resume. Machine restarts at the exact cycle point of release. Clutch will run in either direction and has provision for automatic power shut-off. Made by **Centric Clutch Co.**, Trig-O-Matic Dept., Route 9, Woodbridge, N. J.

▲ For more details circle NED-206 A4 on enclosed inquiry slip ▲

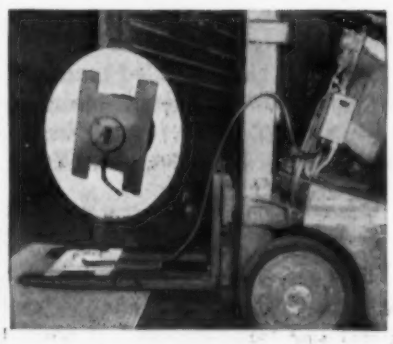
SELF-ALIGNING COUPLING for shafts from ¾ to 6 in.



Full shaft contact for entire length of the bushings regardless of undersize or oversize shaft diameters is provided by the self-aligning Sleevelock coupling. Easily mounted and removed, it uses the principle of tapered bore with split bushing. It is made in sizes for ¾ to 6-in. diameter shafts. Made by **Medart Co.**, 3535 DeKalb St., St. Louis 18, Mo.

▲ For more details circle NED-207 A4 on enclosed inquiry slip ▲

LIFTING MAGNET for fork trucks lifts dockboards



Dockboards and plates can be safely handled by this lifting magnet designed for use by fork lift trucks. It rests on the forks and is operated from a drum switch on the steering column. When the 12-in. unit is not in use, it is carried on the truck's rear deck. Current is supplied from the battery of any 32 or 36-v battery operated truck, or from the 6-v generator and battery used for lights on gasoline-operated trucks. Capacity is up to 900 lb. Made by **Cutler-Hammer, Inc.**, 312 N. Twelfth St., Milwaukee 1, Wis.

▲ For more details circle NED-208 A4 on enclosed inquiry slip ▲

INSURE *Proven Quality* with JONES PLUGS AND SOCKETS

P-306-CCT Plug, Cable Clamp in Cap.

Jones Series 300 illustrated. Small Plugs & Sockets for 1001 Uses. Cap or panel mounting.

S-306-AB Socket with Angle Brackets.

- Knife-switch socket contacts phosphor bronze, cadmium plated.
- Bar type Plug contacts brass, cadmium plated, with cross section of 5/32" by 3/64".
- Insulation molded bakelite.
- All Plugs and Sockets polarized.
- Metal Caps, with formed fibre linings.
- Made in two to 33 contacts.
- For 45 volts, 5 amperes. Efficient at much higher ratings where circuit characteristics permit.

Ask for Jones Catalog No. 17 showing complete line of Electrical Connecting Devices, Plugs, Sockets, Terminal Strips. Write or wire today.

Jones
HOWARD B. JONES DIVISION
CINCH MANUFACTURING CORPORATION
CHICAGO 24, ILLINOIS
SUBSIDIARY OF UNITED-CARR FASTENER CORP.

▲ For more details circle NED-209 A4 on enclosed inquiry slip ▲

COMBAT WEAR

in your plant
in your product

Use Stock Bars of

AMPCO* METAL

Grade 18
Centrifugally Cast

Don't put up with costly wear. Make your bearings, bushings, gears, nuts, etc. out of stock bars of centrifugally cast Grade 18 Ampco Metal — from your own stores or Ampco's Milwaukee stock.

You can get 3 heat-treated variations from Ampco, Milwaukee. Select the one best suited for any particular application by reference to the following table:

	Grade 18	18-13 (H.T.)	18-22 (H.T.)	18-23 (H.T.)
Tensile	105,000	105,000	110,000	110,000
Yield	38,000	35,000	55,000	46,000
Elongation	20.0	20.0	8.0	16.0
Brinell (3000 kg)	187	183	228	207

Stocked in standard 12½" lengths, rough bored, faced one end. Prompt delivery on all sizes from 1⅛" to 3⅞" I.D., 1¾" to 6" O.D. Solid extruded bars, ½" to 4½" also available. Write today for your free wall chart and a 4-page data sheet giving detailed information.

AMPCO®
Ampco Metal, Inc., Dept. NE-1, Milwaukee 46, Wis.
West Coast Plant • Burbank, California
D-18 *Reg. U. S. Pat. Off.

▲ For more details circle NED-210 A4 on enclosed inquiry slip ▲

CUTS METAL FAST AND ACCURATELY

Whether you shear 26 gauge or one inch thick metal, you want smooth, straight, burrless cuts. Resulting pieces must be accurate within close tolerances.

In addition, you want a machine that performs for long periods without need of adjustment and maintenance. It must be easy to operate and be provided with ample safety features. Knives must stay sharp after thousands of cuts.

No machine meets these requirements better than a Steelweld Shear. We urge you to get the facts.

STEELWELD Pivoted-Blade SHEARS CATALOG No. 2011

Send for free copy of catalog No. 2011.

THE CLEVELAND CRANE & ENGINEERING CO.
6633 East 282nd St., Wickliffe, O.

STEELWELD SHEARS

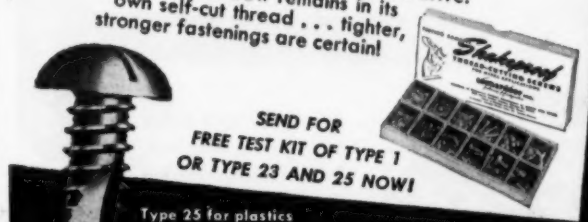
▲ For more details circle NED-211 A4 on enclosed inquiry slip ▲

Type 1 for steel
Type 23 for die castings

FREE!

TEST OFFER PROVES
NO TAPPING WITH
SHAKEPROOF
T. M. REG. U. S. PAT. OFF.
THREAD-CUTTING SCREWS

They actually **cut** their own mating thread in metal or plastic . . . just drill and drive! Because each screw remains in its own self-cut thread . . . tighter, stronger fastenings are certain!



SEND FOR FREE TEST KIT OF TYPE 1 OR TYPE 23 AND 25 NOW!

Type 25 for plastics

SHAKEPROOF
"Fastening Headquarters"
DIVISION OF ILLINOIS TOOL WORKS
St. Charles Road, Elgin, Illinois
Offices in principal cities

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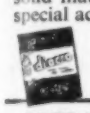
Bend a Variety of Materials

Accurately, Easily, Quickly with a versatile DI-ACRO* BENDER

Simple and complex bends can be made in ductile materials. Capacity of five hand models is from 1/16" wire to 1" round mild steel bar. Tooling is available for most forming requirements in solid materials and tubing, also many special accessories.

DI-ACRO HYDRA-POWER BENDER

A universal hydraulically operated bending machine that is equally as flexible as hand operated machine. Di-Acro Hydra-Power Benders are especially designed for those long runs and heavy bending operations which are impractical for manually operated equipment.



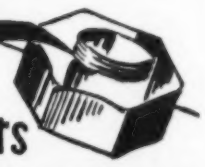
WANT MORE INFORMATION?
Send for New 32-Page Catalog
*Pronounced Die-ack-ro

di-acro PRECISION METALWORKING MACHINES

O'NEIL-IRWIN MANUFACTURING CO.
354 8th Avenue • Lake City, Minn.

For more details circle NED-213 A4 on enclosed inquiry slip

KROIL CREEPS IN



loosens frozen parts

11,500 industrial users depend upon this amazing new chemical tool when some frozen parts tie up valuable machinery or threaten production. They say . . .

"Kroil will loosen almost anything from an embalmer's needle to a bulldozer."

"We have excellent results loosening stuck slides on musical instruments."

"On a 25-year-old Bessemer gas engine, two bolts twisted off before . . . after using Kroil, they all came out easily."

"Before trying Kroil on heat treat trolleys we broke off every nut . . . since then, we have not lost one."

You too can get these results. Try KROIL on money-back basis.
Gallon, $3.85; with Kroiler squirt gun, $4.95, f. o. b. factory.

Ask for GENIUS AT WORK—a free publication full of ideas for maintenance men.

KANO LABS. 1074 S. THOMPSON LANE NASHVILLE 11, TENN.

For more details circle NED-214 A4 on enclosed inquiry slip

M&M

GIANT KEYSEATERS

M & M Giant Keyseaters, built in a wide range of sizes, speedily and accurately cut internal keyways or splines in the bores of pulleys, gears, fly wheels or any other machine part. Special fixtures and cutters are available for unusual shaped keyways and taper work. Send us your problems today.

MITTS & MERRILL 68

1000 So. Water Street • SAGINAW, MICHIGAN

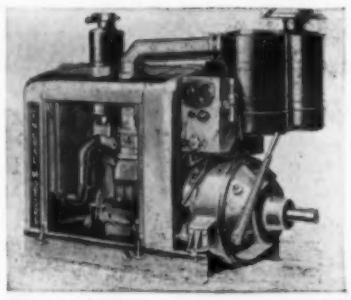
For more details circle NED-215 A4 on enclosed inquiry slip

LEATHER BACK-UP PAD for portable rotary disk sanders

Resilient fibrous structure of leather used to make Multi-Flex back-up pad for portable disk sanders assures long flex life with little loss of elasticity. Pad balance will not vary throughout its life. Any degree of flexibility can be supplied for conforming to contours of work to be done. Large size pads, when needing replacing, can be cut down to smaller size pad. Also, pad can be renewed by replacing leather alone, permitting reuse of metal components. Made by **Alexander Brothers Belting Co.**, 410 N. Third St., Philadelphia 23, Pa.

For more details circle NED-216 A4 on enclosed inquiry slip

INDUSTRIAL DIESEL packaged engine delivers 76 bhp



Of two-cycle design and having an 18:1 compression ratio, packaged diesel unit produces 76 bhp at 2500 rpm and weighs 1450 lb. It is especially adaptable as a source of portable power for shovels, air compressors, pumps and similar units. Including base, radiator, air-cleaners and clutch, it measures only 54 in. long, 28 in. wide and 48 in. high. Made by **General Motors Corp.**, Detroit Diesel Div., 13400 W. Outer Dr., Detroit 28, Mich.

For more details circle NED-217 A4 on enclosed inquiry slip

SKYLIGHTS round, square and rectangular shapes

Application of Plexiglas Domelites to buildings of all types introduces a weather tight source of daylight with a white-light transmission of 92 per cent. Clear and colorless type Plexiglas absorbs ultraviolet rays and prevents fading of fabrics and bleaching of colors. White translucent type softens and evenly diffuses light, reflects infrared rays, absorbs heat and reduces glare. Units are easily installed and are made in square, round and rectangular shapes. Fluorescent or incandescent light fixtures can be recessed into the skylights for night illumination. Standard dimensions are from 20 x 20 in. to 64 x 96 in. Various frame materials are available. Made by **E. Van Noorden Co.**, 109 Magazine St., Boston, Mass.

For more details circle NED-218 A4 on enclosed inquiry slip

METZGAR LIVE-ROLLER CONVEYOR

Specifically Recommended for

- Moving sharp-cornered and rough-edged items
- Conveying various sizes and shapes
- Power unit in gravity line

Work can be held momentarily for adjustment or inspection without cutting main drive. May be used on slight incline or decline.

An extremely versatile power conveyor when fitted to your needs.

Standard widths: 11½" — 15" — 18" — 24". Length to suit. Conveyors up to 30' are powered by a 110 V. single phase gearhead A.C. or D.C. motor; longer units, 220/440 three phase A.C. or D.C. Roller spacing as required. Factory lubricated for life.

- Production-line work movement
- Handling heated and heat-treated items

Our engineers can help you most when you explain your requirements fully. Ask for Bulletin J-1.

METZGAR CONVEYOR CO.

416 Douglas, N. W.

MFRS. OF WHEEL & ROLLER GRAVITY & LIVE ROLLER CONVEYORS • POWER BELT CONVEYORS • SWITCHES • ACCESSORIES & REEL DOLLIES

GRAND RAPIDS 4, MICH.

For more details circle NED-219 A4 on enclosed inquiry slip

WIRE MESH

Jelliff

Specializing in the non-ferrous metals in counts to 200 x 200 or 50 x 750 and widths up to 48" in all commercial weaves

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SOUTHPORT • CONNECTICUT • USA

WIRE PRODUCTS Jelliff SINCE 1880

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You're ahead 3 WAYS with KEM LUSTRAL® ENAMEL!

Simplify the job . . . do away with need for many special enamels . . . get the benefit of volume production of highest industrial quality materials!

If you use enamels for any purpose, or for any product—wood or metal—KEM LUSTRAL's multi-usefulness may show a way to important savings.

Get the facts about this top-quality, versatile industrial enamel! It's one of a complete line of Sherwin-Williams product finishes especially developed to meet production-line requirements. Check your classified telephone directory for location of your nearest Sherwin-Williams Branch. Ask for brochure KL-511. Or mail the coupon below.

Services of trained industrial finish specialists available in your area through nearest Branch.

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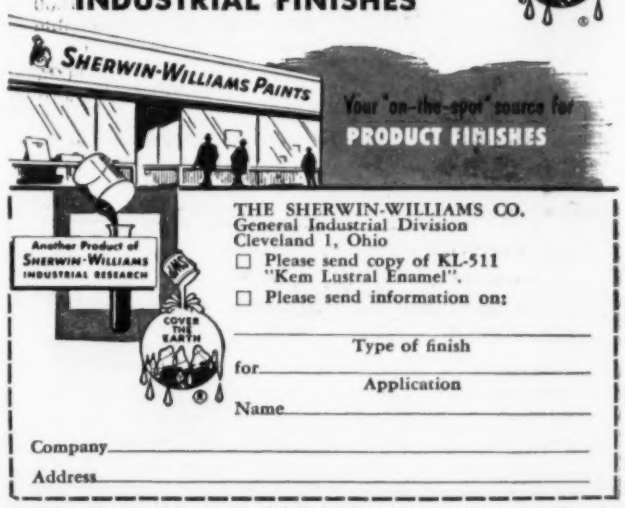

THE SHERWIN-WILLIAMS CO.
General Industrial Division
Cleveland 1, Ohio

☐ Please send copy of KL-511 "Kem Lustral Enamel".
☐ Please send information on:

_____ Type of finish
for _____ Application
Name _____
Company _____
Address _____

For more details circle NED-221 A4 on enclosed inquiry slip

TO THE INGENIOUS

Not familiar with this

NEW INDUSTRIAL TOOL

Free Sample of Fullergript Brush Strip

What problems can you solve by adapting Fullergript to your equipment?

This brush strip can be coiled or twisted into numerous shapes. It can be formed to give intermittent or continuous brushing action. It adapts to stationary or power driven applications. How it may help *you* is a matter of your own ingenuity — plus the services of the Fuller Brush Engineering Dept. Find out what Fullergript can do by sending for a sample strip. We will also send a booklet showing its versatility. Simply write today.

The economy of continuous operation made possible by continuous scrubbing to remove hard baked deposits from steel conveyor in bake oven. Power driven unit applies action through two types of Fullergript brush strip.

INDUSTRIAL Fuller BRUSH CO. DIVISION

3530 MAIN STREET • HARTFORD 2, CONN.

Power driven brushes, Factory & Institutional cleaning tools, Waxes & Detergents

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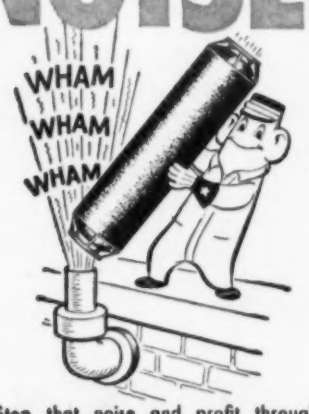
STOP THAT NOISE!

from Air, Steam and other gas discharges

with

BURGESS-MANNING SNUBBERS



Stop that noise and profit through better neighbor and employee relations. Avoid compensation claims.

Burgess-Manning Snubbers are engineered to effectively correct your specific noise problem. There is no obligation for recommendations. Send us a description of your problem.

BURGESS-MANNING COMPANY

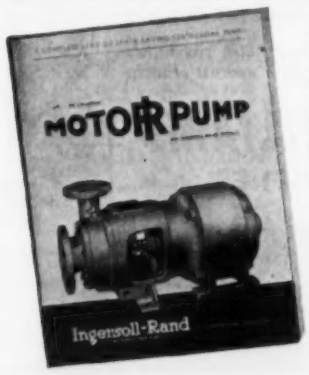
755 East Park Avenue, Libertyville, Illinois

▲ For more details circle NED-223 A4 on enclosed inquiry slip ▲

has all the

INFORMATION

you want about pumps!



The new Ingersoll-Rand pump catalog is the last word on pump information. It shows all types of close-coupled units, and tells where they are used and how. It has specifications for every type pump in the 5 to 1800 gpm range . . . gives valuable pump engineering data . . . shows typical pump problems. Send for your copy today.

Use the coupon below.

873-9

INGERSOLL-RAND
11 BROADWAY, NEW YORK 4, N. Y.

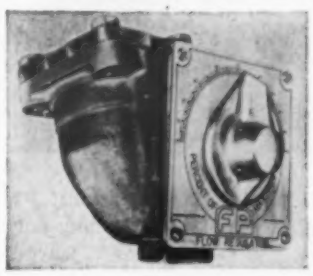
Please send me your new pump catalog No. 7093-D.

Name.....
Company.....
Address.....
City.....Zone.....State.....

▲ For more details circle NED-224 A4 on enclosed inquiry slip ▲

FLOW REGULATOR

screwed directly into pipeline



Easily maintained self-operated flow regulator can be screwed directly into a pipeline to maintain a preset flow rate in spite of changes in upstream or downstream pressure. It is operated entirely by liquid passing through it. Regulator is adaptable to in-line or panel mounting, as dial and capacity regulating knob is in front, and controller body is rear mounted. Direct manual and remote pneumatic setting arrangements are interchangeable. The ½, 1 and 2-in. sizes can handle flow ranges of 0.5 to 5, 1.0 to 15 and 6 to 80 gpm, respectively. Made by **Fischer & Porter Co.**, 17 Jacksonville Rd., Hatboro, Pa.

▲ For more details circle NED-225 A4 on enclosed inquiry slip ▲

APRON CONVEYORS

variety of piano-hinged types for handling castings, scrap and chips

Three pan types, four chain pitches and four basic assemblies enable line of piano - hinged apron conveyors to meet needs of a wide variety of applications. Pans are interlocked at the articulation point to provide a minimum of opening and a smooth joint and to prevent material from seeping through.

Casting, stampings, scrap and chips are among products for which conveyors are suited for handling. Larger sizes provide a moving table for sorting castings in a foundry. Perforated pans can be furnished for quench tank service. Under certain conditions, units can be adapted to handling many types of coarse and granular materials.

Installation can be for conveying materials up and down slopes as steep as 45 degrees. Flat or semiflat pans, available in widths from 12 to 48 in. are made of steel, stainless steel, aluminum and other materials. Variety of drives is offered. Made by **Link-Belt Co.**, Dept. NED, 307 N. Michigan Ave., Chicago 1, Ill.

▲ For more details circle NED-226 A4 on enclosed inquiry slip ▲

DO YOU KNOW? A new wet burnishing method for polishing and buffing utilizes revolving rubber mats which operate in a wet abrasive slurry. Reported to be more economical than conventional buffing methods, system uses Ger-O-Matic machines. Process is licensed and machines are sold to industry. Developed by Gerity-Michigan Corp., Adrian, Mich.

▲ For more details circle NED-227 A4 on enclosed inquiry slip ▲

This New Small Flow Valve Just Won't Quit!

Proven under pressure in 2 years of rugged field tests, new Leslie SMALL FLOW Reducing Valve fills the bill where small flows of steam, air, gas or liquid are a problem. Famous Leslie quality and design means you set it and forget it.

Easy to size for top performance Send for really complete data in Bulletin S11-A.

2639

TRADE LESLIE MARK

THE FIRST NAME IN PRESSURE, TEMPERATURE AND LEVEL CONTROLS
Since 1900

LESLIE CO., 227 Grant Ave., Lyndhurst, New Jersey

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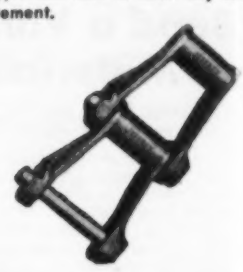
CHAINS AND SPROCKETS

Thousands of tough jobs call for Jeffrey Chains and Sprockets. They are in universal use for unit machinery, for conveyors, bucket elevators and for transmitting power.

You can't go wrong when you select Jeffrey Chains and Sprockets . . . they are being put through the acid test of actual service on thousands of tough jobs . . . and especially where the demand is for top-quality products.

A type and size to meet any requirement.



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Columbus 16, Ohio

IF IT'S MINED, PROCESSED OR MOVED . . . IT'S A JOB FOR JEFFREY!

sales offices and distributors in principal cities

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POWER TRANSMISSION

DESIGNED FOR THE JOB

GIVES GREATER EFFICIENCY

ENGINEERED RIGHT IN YOUR OWN PLANT

Rynel Design-Engineering Service offers all users of **standard** or **special** power reduction units custom-facilities for efficient power application. Rynel engineers will consult with you right in your own plant. As a result of Rynel's exclusive air-lift, this expert assistance on speed reduction problems is available immediately. You are invited to call a Rynel engineer for consultation.

CALL A RYNEL ENGINEER - STerling 4440

He will Visit You The Same Day

MEMBER AGMA

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Double Reduction
Right Angle
Parallel Shaft
Shaft Mounted
Speed Reducers and Gearmotors

RYNEL Corporation

312 Miller Street • Sterling, Illinois

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NEW TURNTABLE DOWN DRAFT dust collecting benches by WOLVERINE

Revolving turntable allows the operator to work all around the casting without stop for re-positioning . . . an addition to the standard Wolverine rectangular benches — Provides: • Better dust collection due to higher velocity. • New design, permitting exhaust outdoors where required, or return to room if desired. • Standard velocity, 300 feet per minute, and, if application requires, higher velocities available up to 800 feet per minute. • Ideal system for collecting dust from grinding, polishing and sanding operations.

Heavy duty industrial viscous filters in rear compartment remove dust from air stream and axial flow fan in top of rear compartment discharges vertically back into the room or outdoors if required.

Write for descriptive bulletin, Dept. N

WOLVERINE EQUIPMENT CO.
31 MAIN ST., CAMBRIDGE 42, MASS.

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5 REASONS FOR CALLING CORDS LTD.
For Cords and Cord Sets

★ Fast delivery on cords of standard construction.

★ Complete engineering and manufacturing service on cords for special applications.

★ Integrated engineering-production control from rod mill to mold department.

★ Most comprehensive stock of dies and molds for electronic cords and assemblies in existence.

★ Quality proved by use on millions of products.

Write for details, explaining your application

WIRE SX PRODUCTS

CORDS LTD.
DIVISION OF ESSEX WIRE CORPORATION
121 DODGE STREET, DE KALB, ILLINOIS

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Work with agar? ink? molten glass?

TEST • STUDY • CONTROL
VISCOSITY
As Simply, Quickly and Easily as Taking Temperature Readings

WITH A *Brookfield*
SYNCHRO-LECTRIC
VISCOMETER

Adaptable to any problem from less than one to 32,000,000 centipoises. Send for illustrated catalog.

Just a flick of a switch, then read the Brookfield dial, and you have your viscosity determination in centipoises. The whole operation, including cleaning up, *takes only a minute or two.*

Available in a variety of models suitable for extremely accurate work with both Newtonian and non-Newtonian materials, Brookfield Viscometers are portable and plug in any A.C. outlet. *Write today.*

User in Cleveland, Ohio, reports: "Because of its portability, wide range of application, and ease of cleaning, our Brookfield Viscometer has saved us many times its cost in controlling the quality of our products."

Write Dept. O., Stoughton, Mass.

BROOKFIELD ENGINEERING LABORATORIES, INC.

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TUBE BENDER
6-lb tool for copper tubing

Hard and soft copper tubing in sizes of 5/8 and 7/8-in. OD can be bent by the TT-57 bender. Made of lightweight metal and weighing only 6 lb, the tool has the two bending sizes in one tool, both with the same 3-in. radius. It has two parts. Two pipe handles, which are not included, are two pieces of regular 3/4-in. pipe not over 35 in. long. Made by **Tal Bender, Inc.,** Dept. 4, 417 N. Water St., Milwaukee 2, Wis.

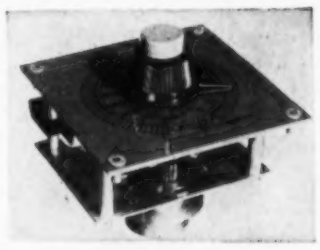
▲ For more details circle **NED-234 A4** on enclosed inquiry slip ▲

MOUNTED DOCKBOARD
for permanent dock installation

Strength and lightness of magnesium are combined in Perma-Dock dockboards, designed for permanent installation on concrete docks. They are easily raised and lowered by one man. Recessed installation permits the unit to self-adjust to truck level and automatically compensate for truck spring deflection. Safety curb prevents power truck wheels from colliding with the curb rail. Made by **Magline Inc.,** P. O. Box 200, Pinconning, Mich.

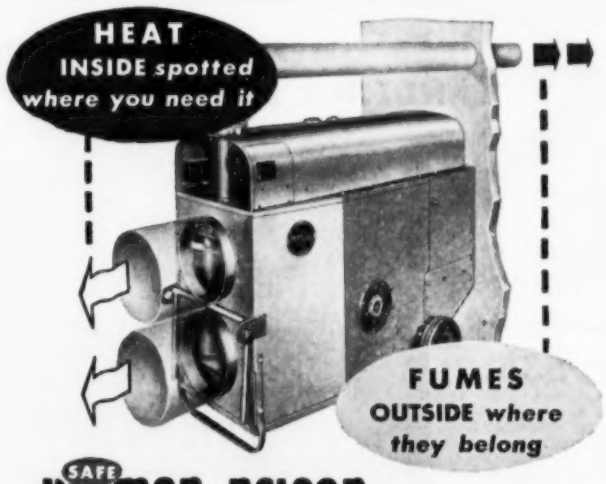
▲ For more details circle **NED-235 A4** on enclosed inquiry slip ▲

RESET TIMER
for intervals from 0 to 150 seconds



Designed to hold an electrical circuit closed for a preset time after the "start" button is pushed, model 437 reset timer can be set for any desired interval between 0 and 150 seconds. Applications include use in preheaters, photo copy machines, plastic molding and other processes requiring accurate timing. Settings remain fixed and can be repeated indefinitely until the dial is reset. Normally open contacts are rated 20 amp on 110 v or 10 amp on 220 v ac. Faceplate dimensions are approximately 4 1/4-in. square. Unit can be furnished with normally closed contacts and different dial calibration and range. Made by **Masco Engineering Service,** Dept. S, 2119 S. Sepulveda Blvd., Los Angeles 25, Calif.

▲ For more details circle **NED-236 A4** on enclosed inquiry slip ▲



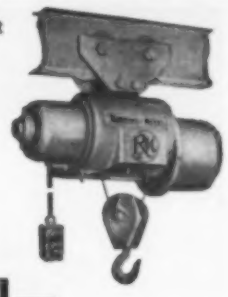
SAFE
HERMAN NELSON
PORTABLE AIR HEATERS

Here's safe temporary heat you can always trust! Herman Nelson Portable Air Heaters operate on the "sealed flame" principle. They are vented. They have automatic safety controls. There's no danger of fire, carbon monoxide, smoke or soot. Clean heated air *only* is directed to any spot you select—through flexible canvas ducts. Herman Nelson has the only complete line of completely safe Portable Air Heaters . . . oil or gasoline fired; electric or gasoline powered. Capacities from 125,000 to 450,000 BTU.

Get all the FACTS about ALL Portable Heaters. Write American Air Filter Company, Inc., Dept. 116, Moline, Illinois.

▲ For more details circle **NED-237 A4** on enclosed inquiry slip ▲

Robbins & Myers J Hoist



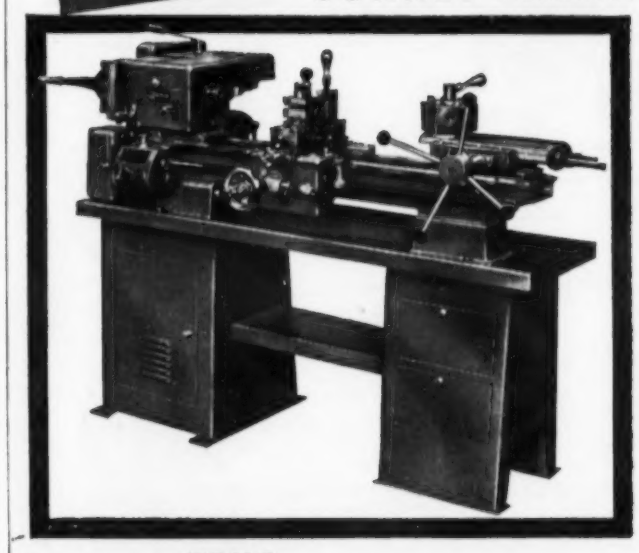
check
THE J-HOIST POINT BY POINT

See why it is today's biggest hoist value. Special R & M high-torque hoist motor — One piece cast aluminum alloy frame with oil and dust-tight covers — Heat treated gears and precision ground steel shafts running in sealed ball bearings — Plow steel cable — Rugged limit switch — Safety hook block — Forged steel hook — Capacities 500 to 4,000 lbs. — Speeds 15 to 30 f.p.m. — Lift 10 to 20 ft. — Mounting choice of lug, hook, or plain trolley — And J hoist prices start at only $268! For complete details and address of your nearby distributor, write for Bulletin No. 851-A. Please mention: INDUSTRIAL MAINTENANCE

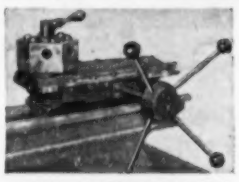
take it up with
ROBBINS & MYERS, INC.
SPRINGFIELD, OHIO — BRANTFORD, ONTARIO

▲ For more details circle **NED-238 A4** on enclosed inquiry slip ▲

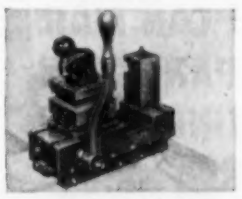
NEW CLAUSING 5300 TURRET LATHE



biggest PLUS in lathe history!



HEAVY DUTY BED TURRET
Massive grey-iron bed and ram castings . . . 3/4" x 5/8" precision ground ways . . . key parts hardened steel precision ground . . . turret head, 5 5/8" hex, 6 stations, 1" tool hole . . . ram, 16 3/4" long . . . weight 130 lb.



CARRIAGE TURRET
This assembly replaces the standard carriage . . . four way tool post turret is released by convenient lock handle and rotated to any one of four operating positions, automatically indexed. Operates either by lever or cross feed screw.

The massive new 12" Clausing "5300" series precision lathe equipped with lever type collet chuck, lever type carriage turret and bed turret is the biggest PLUS in the 1" collet capacity hand turret lathe field. For the rapid machining of duplicate parts, on short run jobs and hand screw machine work, it is unexcelled. Ideal for second operations . . . perfect for experimental and research development work.

Bed turret has 6 stations for 1" tool shanks. Carriage turret provides for five more operations. Precision ground, forged steel headstock spindle turns on widely spaced Timken "Zero-Precision" tapered roller bearings and has 1" collet capacity and 1 3/8" hole.

Other *Accuracy Plus* and *Capacity Plus* features include new heavy-duty headstock, massive bed and precision ground Vee and flat ways, built-in countershaft with friction clutch and brake for instant starts and stops of spindle without stopping motor, automatic double-walled apron with splash lubrication, 12 spindle speeds, 29 to 1300 RPM, quick change mechanism, 48 power feeds.

The Clausing "5300" turret lathe equips you for test runs or round the clock production at lowest cost. See it at your nearest Clausing dealer's!

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Atlas CLAUSING PRECISION MACHINE TOOLS

CLAUSING DIVISION
Atlas Press Company
1-113 N. PITCHER ST., KALAMAZOO, MICHIGAN

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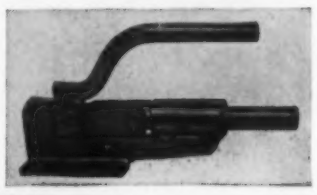
▲ For more details circle NED-240 A4 on enclosed inquiry slip ▲

SUPPLY TRANSFORMERS
subminiaturized custom made type

Having high performance characteristics in relation to size and weight, subminiaturized supply transformers are custom made to specifications and are capable of withstanding severe shock, temperature variations and vibration. Model DR-T 107, illustrated, is developed primarily for printed circuit applications and delivers up to 5 w at 400 cps. It is designed to feed a pair of synchro control transformers. It weighs 2/3-oz, is ⅝-in. high and ¾-in. diameter. Made by **D & R, Ltd.,** 402 E. Gutierrez St., Santa Barbara, Calif.

▲ For more details circle NED-242 A4 on enclosed inquiry slip ▲

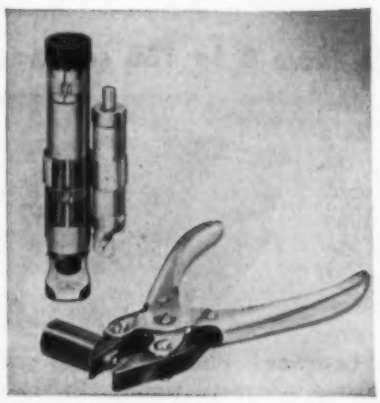
TOGGLE CLAMP
plunger type gives 3000-lb pressure



Of plunger-type design, model P-2 toggle clamp has 3000-lb horizontal clamping pressure and a 2-in. plunger stroke. Other features include large pivot pins, welded construction and heavy steel frame which will not bend or spring under rated load. Plunger is fabricated from bronze to resist welding splatter and is drilled and tapped for set screw. Made by **Erico Products, Inc.,** 2072 E. 61st Pl., Cleveland 3, O.

▲ For more details circle NED-243 A4 on enclosed inquiry slip ▲

PORTABLE HARDNESS TESTER
for sheet from 0.010 to 0.250 in.



Metal sheet hardness tester type 317 is fully portable and will test sheets from 0.010 to 0.250-in. thick. Pressure is applied by a pair of parallel jaw pliers carrying an indenting ball retained at a calibrated 150-kg load by a precision spring. Pliers have limiting pad which forms all indentations with the same load. Calibrated microscope with reticle reading to within 2 points Brinell is used after indentation has been made to determine stock hardness value. Instrument has self-contained battery type illuminator. Made by **Pacific Transducer Corp.,** 11921 P. Pico Blvd., Los Angeles 64, Calif.

▲ For more details circle NED-244 A4 on enclosed inquiry slip ▲

IMPROVED MODEL McCORD UNIT HEATER

The improved McCord Unit Heater incorporates every unit heater advancement that McCord engineers and the experience of thousands of users could suggest. The distinctive modern design with rounded corners combines improved appearance with greater strength and houses a heating unit that sets a new standard of heat transfer efficiency and quietness. The scientific design of the individual turbo spiral fin tube core provides even distribution of heated air at high velocity. The individual tubes prevent stresses due to unequal expansion. The entire heating unit is spring suspended and floats free in the casing eliminating rigid connections. Deep pitched fans provide high air delivery and quietness of operation.

This improved heater is a development of the experience gained from the thousands of McCord Unit Heaters in service. It combines good appearance with that inherent McCord quality of ruggedness and dependability that has made McCord the standard among many of the largest industrial users. You may also replace old leaking heaters using new McCord units and your old fan and motor. Write for new catalogs—Unit heaters and blast coil units. **McCord Corporation,** 2580 E. Grand Blvd., Detroit, Mich. —Advt.

▲ For more details circle NED-246 A4 on enclosed inquiry slip ▲

You Just Can't File Away These Problems...

BLAST CLEANING

. . . of bridges, buildings, tanks, structural work

Pangborn Blast Cleaning Machine—Cleans tanks, bridges, structures quickly and economically. Ideal for maintenance and other jobs, such as removal of dirt, rust, etc. Six sizes, stationary or portable. $188 and up.

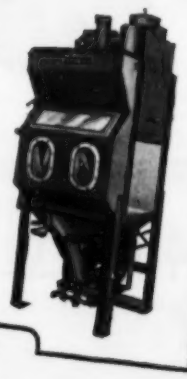
. . . of small castings, forgings, stampings, heat treated parts.

Pangborn Blast Cabinet—Saves time and money in cleaning small metal parts, removing rust, scale, grime, old paint, etc., in a few seconds. Perfect for producing clean, smooth surfaces on pieces 60" x 35" in size. Models from $319 and up.

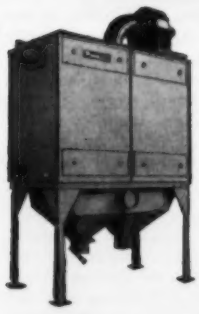
PRECISION FINISHING

. . . of molds, dies, tools

Pangborn Hydro-Finish Cabinet—Removes scale and directional grinding lines . . . holds tolerances to .0001" and prepares surfaces for painting or plating. Liquid blast reduces costly hand cleaning and finishing of molds, dies, tools, etc. Models from ..... $1410 and up.



CONTROLLING DUST



. . . at the source of origin

Pangborn Unit Dust Collector—Traps dust at the source. Reduces maintenance costs . . . keeps plant clean and improves community relations. Allows reclamation of valuable material. Models from .....$286 and up.

BUT YOU CAN MAIL THIS COUPON TO PANGBORN FOR HELP IN SOLVING THEM!

Pangborn

Look to Pangborn for the latest developments in Blast Cleaning and Dust Control equipment

☐ Blast Cleaning Cabinets
☐ Blast Cleaning Machines
☐ Unit Dust Collectors
☐ Hydro-Finish Cabinets

PANGBORN CORP., 2400 Pangborn Blvd., Hagerstown, Md.
Gentlemen: Please send me more information on the equipment I've checked. To be used for.....
.....
Name .....
Company .....
Address .....
City .....Zone....State.....

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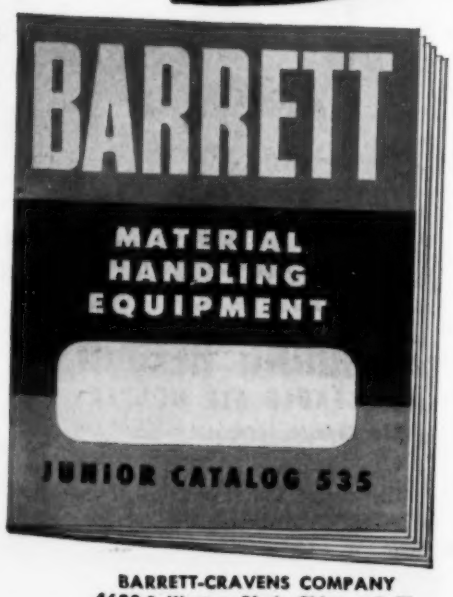
IDEAS ON MATERIALS HANDLING PROBLEMS

WRITE FOR 100-PAGE CATALOG 535



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BARRETT
One Man Does More Than 3 or 4 . . . with a Barrett

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6 STEPS TO GREATER ABRASIVE SAVINGS

This new Wheelabrator Steel Shot Bulletin describes the 6 steps to lowest overall abrasive blast cleaning costs. It explains how these plus features in Wheelabrator Steel Shot are setting a new standard for blast cleaning efficiency. If you are looking for ways to improve quality and cut costs, send for Bulletin 89-A.

American WHEELABRATOR & EQUIPMENT CORP.
WHEELABRATOR STEEL SHOT
508 S. Byrkit St., Mishawaka, Indiana

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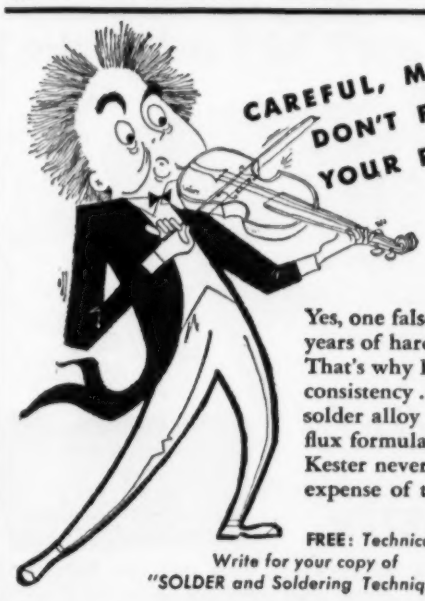

CAREFUL, MAESTRO, DON'T FIDDLE AWAY YOUR REPUTATION!

Yes, one false note can ruin years of hard-earned good will. That's why Kester stresses consistency . . . makes sure the solder alloy and especially the flux formula never varies. Kester never experiments at the expense of the solder user!

FREE: *Technical Manual*
Write for your copy of "SOLDER and Soldering Technique."

KESTER

SOLDER COMPANY
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Newark 5, New Jersey • Brantford, Canada

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MAINTENANCE TIPS FOR YOU

in every issue of the

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On-the-job reports proving neoprene's superiority in the field.

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The rubber made by Du Pont since 1932

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McGILL® *Grounded Portable lamp guards . . .*

. . . offer 5 big advantages!

1. Safety, convenience and dependability of a completely grounded portable of unsurpassed quality.
2. Approved 3-wire convenience outlet.
3. Screw shell .006" heavier than standard.
4. Levolier Switch and socket assembly.
5. Impact resisting molded Phenolic handle.

All models available as Service Light with 16-35JT red thermoplastic cord. Also without switch and outlet.

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McGILL® electrical specialties

McGILL MANUFACTURING CO., INC. 151 N. CAMPBELL ST. VALPARAISO, INDIANA

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you can **CUT COST**

- Conserve Critical Metals
- Eliminate Tooling
- Eliminate Machining Operations
- Save Time . . . Speed Production
- Conserve Manpower
- Release Equipment and Floor Space
- Engineer for Better Design

when you plan with **microcast®** *in mind*

Parts of intricate design which would be costly to produce by conventional methods can be economically cast by MICROCAST. Also, it is possible to specify high-melting point alloys in small, intricate parts where resistance to heat, wear, and corrosion is required.

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MICROCAST PRECISION CASTINGS PROCESS

MICROCAST DIVISION, Austenal Laboratories, Inc. 224 E. 39th Street New York 16, N.Y.

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ROTARY TABLE can be locked in any position

Applications for the improved cam locking rotary table include assembly of small and medium size parts, scraping cross slides of a lathe, drilling and tapping holes in a part or assembly and minor machining operations. It is manually rotated, will support a substantial weight and can be locked in any position. Both bearing surfaces are hand scraped to fit cast iron base. Periphery of table can be graduated in degrees. Center bearing is adjustable to take up wear. Made by **Troyke Mfg. Co.,** 2426 Spring Grove Ave., Cincinnati 14, O.

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RESPIRATOR is approved by Bureau of Mines

Single cartridge Chemocart C 256 chemical respirator is approved by United States Bureau of Mines for low concentrations of organic vapors. It has replaceable cartridge and adjustable head band. Made by **Pulmosan Safety Equipment Corp.,** Dept. NED, 644 Pacific St., Brooklyn 17, N. Y.

▲ For more details circle NED-253 A4 on enclosed inquiry slip ▲

DRILL COOLER for diamond masonry drills

Improved Water Swivel cooling attachment for drilling brick, granite, concrete, marble, ceramic, tile, glass and similar materials is now available in three sizes for drills up to 6½ in. OD. Standard, medium and heavy duty models take drills from ¼ to 1 in., 1 to 4 in. and 3 to 6½-in. OD, respectively, fitting standard drill chucks up to 1-in. diameter. Illustration shows unit equipped with an antisplash attachment which drains waste water and chips into a bucket or other receptacle. Typical performance figure with attachment is drilling a ½ x 1-in. hole in fired porcelain in 9 seconds. Made by **Wheel Trueing Tool Co.,** 3231 W. Davison Ave., Detroit 38, Mich.

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NEW COLD WOOD GLU SETS IN 20 MINUTES!

A Better All-Purpose Industrial Glue

WOOD GLU is a very strong, *fast-setting new* COLD liquid Resin Glue . . an outstanding Paisley scientific development. Now you can bond, *in 20 to 30 minutes,* many different materials heretofore impossible to join with ordinary Wood Glues.

Paisley WOOD GLU is ideal for industrial wood joining operations. Also for faster assembly gluing and bonding of laminated plywood, paperboard, fabrics, leather and similar porous materials. Use it as received, with flow guns, brushes, spreaders. Mail the coupon order form below for trial shipment, on approval!

Gentlemen: Ship on approval, f. o. b. Chicago or New York, the WOOD GLU indicated below: ____ cases 12/qts. @ $2.10 qt. ____ cases 4/1 gals. @ $6.00 gal. ____ 5 gal. cans (bulk) @ $5.50 gal.

Paisley ADHESIVE

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Manufacturers of Glues, Pastes, Resin Adhesives, Cements and Related Chemical Products

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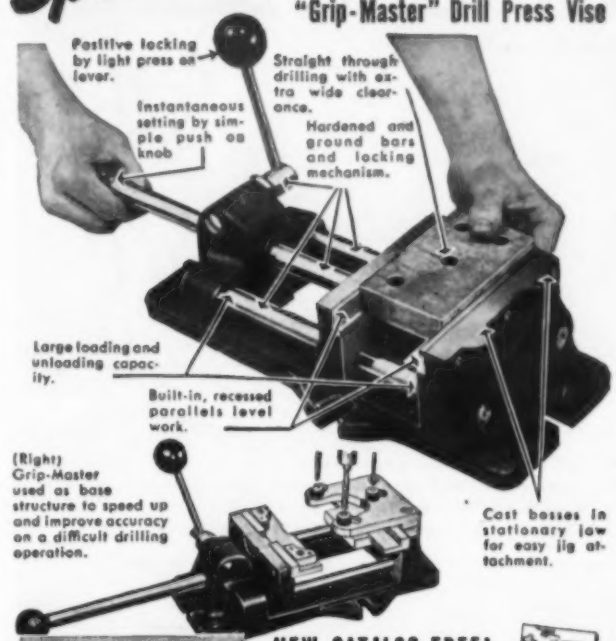
Speed-up OPERATIONS with heinrich "Grip-Master" Drill Press Vise



heinrich TOOLS, INC. FORMERLY NATIONAL MACHINE TOOL CO.

NEW CATALOG FREE! Be sure you have a complete Heinrich Tool Catalog in your files. Your copy will be sent free upon request.

Dept. 304-A • RACINE, WISCONSIN

Drill Press Vises • Fixture Locks • Nibblers Punches • Rod Cutters

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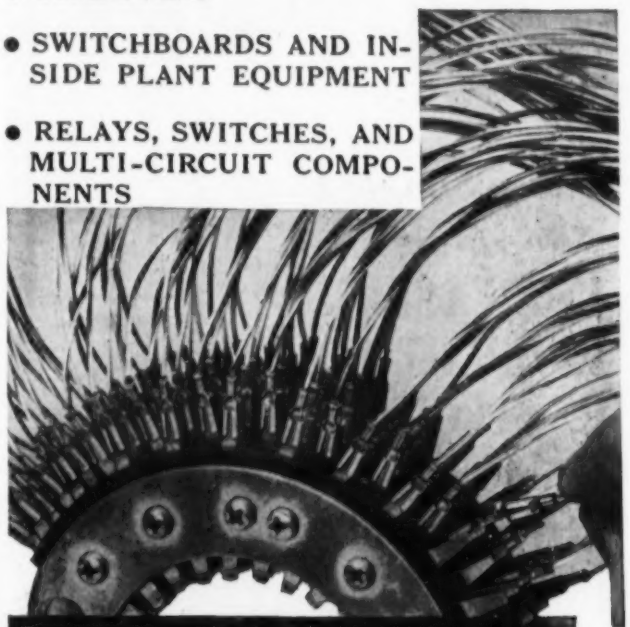
A NEW TERMINATION TECHNIQUE FOR . . .

- COMPUTERS
- SWITCHBOARDS AND INSIDE PLANT EQUIPMENT
- RELAYS, SWITCHES, AND MULTI-CIRCUIT COMPONENTS



FLAT TAPER TAB RECEPTACLES

If you are concerned with the wiring of close spaced equipment, investigate the new AMP Solderless TAPER TAB RECEPTACLE for flat relay or switch tabs shown at right. It is self locking when installed on a male tab with matching 3½° taper, yet can be removed and reconnected any number of times without solder or special tools. These terminals are supplied on reels in continuous strip. Customer crimps them on wires using AMP automatic machines at speeds up to 4,000 per hour!

Performance of these miniature connectors meets exacting requirements for millivolt drop, corrosion resistance, and vibration. They are suited for critical low level circuits or power circuits up to several amperes.

Write to AMP Electronics Division for complete information concerning AMP TAPER TAB RECEPTACLES . . . you will receive data and samples by return mail.

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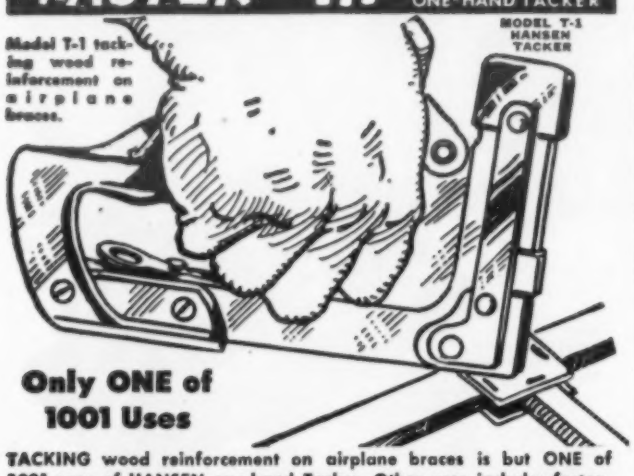
AMP

AIRCRAFT-MARINE PRODUCTS, INC.
2100 Paxton Street, Harrisburg, Pa.
Aircraft-Marine Products of Canada, Ltd.
1764 Avenue Rd., Toronto 12, Ontario, Canada

▲ For more details circle NED-257 A4 on enclosed inquiry slip ▲

YOU CAN DO IT FASTER with HANSEN ONE-HAND TACKER



Only ONE of 1001 Uses

TACKING wood reinforcement on airplane braces is but ONE of 1001 uses of HANSEN one-hand Tacker. Other uses include: fastening screens on TV sets, tacking radio and TV wires, refrigerator door gaskets, chair and auto-seat covers, insulation, etc.

(MODEL T-3-4 HANSEN TACKER)

Made in . . . 36 different models; for driving . . . 80 sizes of staples, the Hansen line offers you a model suited to your individual needs.

A.L. HANSEN MFG. CO.
5164 RAVENSWOOD AVE., CHICAGO 40, ILL.

▲ For more details circle NED-258 A4 on enclosed inquiry slip ▲

These Simple Units Add Up to
INCREASED PROPERTY PROTECTION and LOWER INSURANCE RATES!

THE CHICAGO WATCHCLOCK SYSTEM

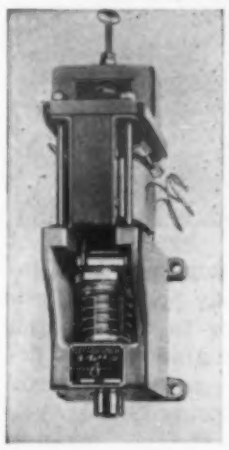
Quickly Pays for Itself!
The CHICAGO WATCHCLOCK system is so reliable, users are given lower insurance rates. The CHICAGO System enables reliable watchmen to PROVE they're on the job. It keeps a permanent record of their performance . . . YOU get extra protection against FIRE, THEFT and SABOTAGE.

Send for FREE booklet that explains the operation of the CHICAGO WATCHCLOCK System and how this low-priced installation is made quickly with only a screw driver! Write to

CHICAGO WATCHCLOCK
Division Great Lakes Industries, Inc.
1522 S. WABASH AVE., CHICAGO 5, ILL.
Offices in Principal Cities

▲ For more details circle NED-259 A4 on enclosed inquiry slip ▲

ELECTRIC IMPACT HAMMER
for controlled impacts up to 3500 lb

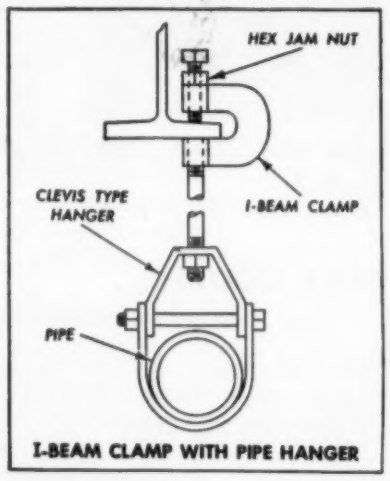


Fixed single-purpose applications where controlled impacts up to 3500 lb are required can employ the Electropunch Jr. electric impact hammer. Packaged unit can be applied to automatic, semiautomatic and manual operations such as staking, riveting, marking, cutting, blanking, forming and drawing of metals, plastics, fabrics, leather and other materials. It combines a solenoid with a mounted ram which delivers accurate controlled blows wherever wanted. Three models, each designed for mounting in any position, have impacts of 1500, 2000 and 3500 lb. Made by **Black & Webster, Inc.**, Dept. N-26, 445 Watertown St., Newton 58, Mass.

▲ For more details circle NED-260 A4 on enclosed inquiry slip ▲

I-BEAM CLAMP
vibration-resistant, for pipe hanging

Adjustable vibration-resistant I-beam clamp is designed to handle process, food and chemical utilities and general industrial requirements for hanging piping systems. Clamp is adjustable to various thicknesses of beams and locks by means of a hardened set screw and jam nut. Jaw accommodates up to ¾-in. flanges. Lower clamp jaw is threaded and is available in four sizes to take ⅜, ½, ⅝ and ¾-in. hanger rods. Clamps are fabricated from 1040 high carbon steel for strength. Globe two-section split-ring clevis hangers afford easy erection of pipe systems. Made by **Hupp Corp.**, 1251 W. 76th St., Cleveland 2, O.



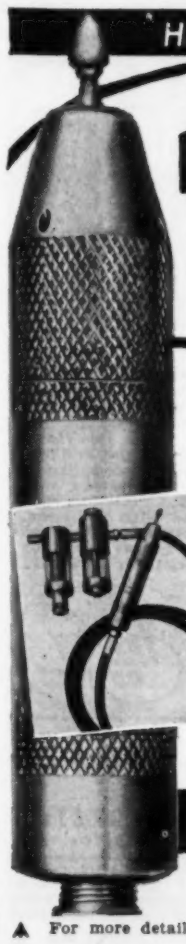
I-BEAM CLAMP WITH PIPE HANGER

▲ For more details circle NED-261 A4 on enclosed inquiry slip ▲

DO YOU KNOW? It's now possible to obtain Clark industrial fork lift trucks, towing tractors, straddle carriers and related materials handling equipment on a lease basis through established dealers. Based on a 3 or 5 year period, annual rental is payable monthly, but in a declining amount. Lease agreements include a regular Preventive Maintenance Contract. For details, write Clark Equipment Co., Buchanan, Mich.

▲ For more details circle NED-262 A4 on enclosed inquiry slip ▲

HERE'S THE NEWEST



100,000 R.P.M. NU-JETT PENCIL GRINDER

Greater Power — New Safety Guard
Automatic Lubrication. Weighs 5 oz.
One Moving Part.

Shown Actual Size 1/8" Chuck.

NU-JETT DOES ANY FINE PRECISION GRINDING, POLISHING, FINISHING. Use it for Etching, Deburring, Die Work, Carving on Wood, Metal, Rubber and Plastic.

Air driven on 50 lbs. pressure or more, very smooth in operation, compact, it truly handles like a pencil.

New Low Cost Package **$42.50**

Here is an outstanding value that includes NU-JETT GRINDER, our new Air Filter, Automatic Lubricator, Hose and Chuck Wrench.

NU-JETT PRODUCTS
1340 Michigan, N. E.
PHONE 9-8831W GRAND RAPIDS, MICHIGAN

▲ For more details circle NED-263 A4 on enclosed inquiry slip ▲

just off the press!

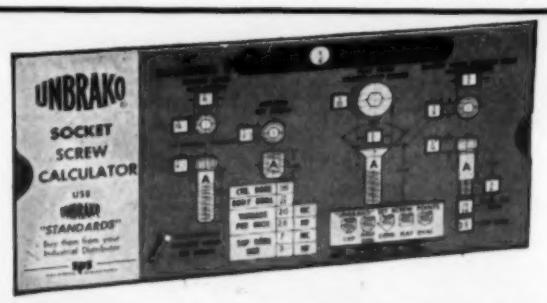
new 48 page industrial **spray nozzle catalog**

Here's the most comprehensive industrial spray nozzle catalog ever printed. Complete data on thousands of standard and special nozzles for every type of spraying.

Write for your free copy of Catalog No. 24.

SPRAYING SYSTEMS CO.
3211 Randolph Street
Bellwood, Illinois

▲ For more details circle NED-264 A4 on enclosed inquiry slip ▲



Our New UNBRAKO Screw Calculator
YOURS FOR THE ASKING

This handy pocket-sized slide-rule type socket screw calculator gives diameters, lengths, socket dimensions, threads and drill sizes—in fact, everything you want to know when using UNBRAKO socket screw products.

And it's free. Ask your UNBRAKO distributor or write STANDARD PRESSED STEEL Co., Jenkintown 24, Pa.

UNBRAKO SOCKET SCREW DIVISION

Standard UNBRAKOS are sold by leading industrial distributors everywhere.

SPS JENKINTOWN PENNSYLVANIA

Self-Locking Set Screws · Flat Head Cap Screws · Shoulder Screws · Knurled Head Cap Screws · Dowel Pins · Button Head Socket Screws

▲ For more details circle NED-265 A4 on enclosed inquiry slip ▲

IDEAL STENCIL MARKING EQUIPMENT

YOUR CUSTOMER ANY CITY U.S.A.

...PUTS "WINGS" on your SHIPMENTS

IDEAL STENCIL MACHINE
Exclusive Automatic Carriage shifts like a typewriter . . . Minimum Margin Grip saves 25% paper . . . 3 letter sizes to fit every need.

FOUNTAIN STENCIL BRUSHES. Handy A, new natural grip design. Handy B, straight handle. Push-button ink control . . . leakproof . . . easy to fill.

FELT TIP FOUNTAIN MARKER. For freehand marking . . . leakproof construction . . . lightweight aluminum . . . replaceable tips.

STENCIL INKS. Complete line of black and colored stencil inks. ALSO a full line of oiled stencil board, and related marking equipment.

FREE! "Ideal Shipping Guide." Money-saving shipping room hints.

STENCIL BOARD

STENCIL INK

HANDY "A" ANGLE BRUSH

HANDY "B" BRUSH

FELT TIP MARKER

IDEAL STENCIL MACHINE CO.
134 Iowa Ave., Belleville, Ill.

▲ For more details circle NED-266 A4 on enclosed inquiry slip ▲

Protects AIR TOOLS AND EQUIPMENT

against rust, scale and condensation in the air line ...provides constant lubrication

The Keller Lubricator-Filter operates automatically when air tools or equipment are in operation. Filter removes moisture as well as solids—easily cleaned by opening drain cock at bottom. Oil feeds from the lubricator through an upright wick—no flooding or waste when tools are not in use.

Transparent bowls show when filter needs draining, or when light spindle oil should be added to lubricator. Write for descriptive Bulletin #65-5.

Send for illustrated descriptive bulletin and detailed information

Keller Tool Company
GRAND HAVEN, MICHIGAN

▲ For more details circle NED-267 A4 on enclosed inquiry slip ▲

One of countless different applications where Rockwood Ball Valves outlast and out-perform all other makes.

Do you need a MAINTENANCE-FREE VALVE?

Maintenance-Free in Coolant Service. Previous valves on this grinding machine were repaired or replaced at least once weekly. The present Rockwood Ball Valves, operating 500 times daily, have required no maintenance in over a year.

Other features: full *round* flow, positive leakproof seating, quick opening and closing. Tested and listed by Underwriters' Laboratories, Inc. Write for complete details. Rockwood Sprinkler Company, 44 Harlow Street, Worcester 5, Mass. Distributors in all principal cities.

ROCKWOOD *FULL-FLOW* BALL VALVES
THE FLOW IS AS ROUND AS THE PIPE ITSELF

▲ For more details circle NED-268 A4 on enclosed inquiry slip ▲

ONE call can answer ALL your gear and sprocket needs!

... when you call on the complete UNION GEAR LINES AND SERVICES

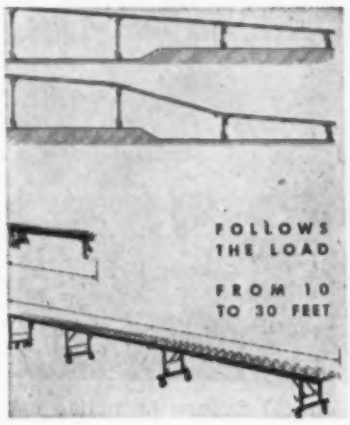
Write today for your copy of our catalog

UNION GEARS

Union Gear & Sprocket Corp. 114-120 Purchase St. Boston, Mass.

▲ For more details circle NED-269 A4 on enclosed inquiry slip ▲

GRAVITY CONVEYOR
telescopes on roller bearings

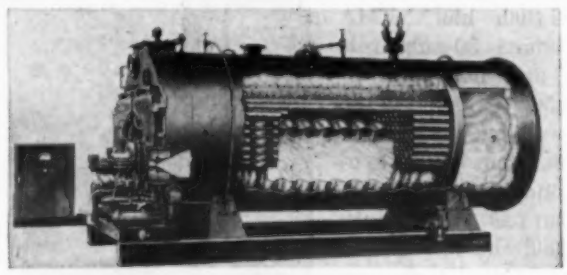


Ten-foot telescoping sections of this redesigned gravity conveyor are joined together only at one universal type roller bearing point. Unit can be placed on irregular or stepped surfaces without binding. Self-adjusting transfer bar between sections eases the ride of even small packages along the conveyor. Extension is with light hand pressure to any length from 10 to 40 ft. Conveyor telescopes at either end and adjusts immediately to expanding and diminishing loads. Roller and skate wheel types of load bearing surfaces are available. Made by **Wilkie Co.**, 5521 Arch St., Philadelphia 39, Pa.

▲ For more details circle NED-270 A4 on enclosed inquiry slip ▲

PACKAGED BOILER
line of steam and water models

Engineered as a complete boiler-burner unit, the Kewanee-Petro line includes both steam and water models. Sizes range from 39 to 456 hp for high pres-



sure steam and from 1,313,000 to 15,300,000 Btu for 15 psi steam or 30 psi water. All models are available for firing No. 6 or lighter oil or for high or low pressure gas, or a combination of the two. Burner controls and accessories are assembled by Petro, Cleveland, O. Scotch type boilers are equipped with all necessary accessories and are mounted on steel skids. Made by **Kewanee-Ross Corp.**, 120 Franklin St., Kewanee, Ill.

▲ For more details circle NED-271 A4 on enclosed inquiry slip ▲

DO YOU KNOW? As a contribution to plant safety, a "non-flam" safety package is offered to metal processing industries. Four products included in package are: Houghto-Safe nonflammable hydraulic fluid; a rust preventive with a high flash point for use in fire hazardous areas; a safe water type cleaning solution for use at room temperature; and Anti-Sep water-soluble cutting base for all types of machining operations. Products offered by E. F. Houghton & Co., 305 W. Lehigh Ave., Philadelphia 33, Pa.

▲ For more details circle NED-272 A4 on enclosed inquiry slip ▲

RUGGED, DEPENDABLE, ACCURATE GAUGES *For Every Purpose*

If you have requirements for pressure, temperature, flow, level or electrical measuring instruments, for the products you make or for manufacturing operations, it will pay you to consult with U.S. Gauge, the world's largest manufacturer of accurate instruments.

Write today and tell us about your requirements.

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UNITED STATES GAUGE

United States Gauge,
Division of American Machine and Metals, Inc.
Sellersville, Pa.

Please send literature checked:
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☐ Steel Case Gauges ☐ Refrigeration Gauges ☐ Government Specification Gauges

Name _____ Title _____
Company _____
Address _____ City _____ State _____

▲ For more details circle NED-273 A4 on enclosed inquiry slip ▲

Fewer Packing Styles Required

With new J-M Chempac®
the asbestos-Teflon packing that withstands virtually all chemicals

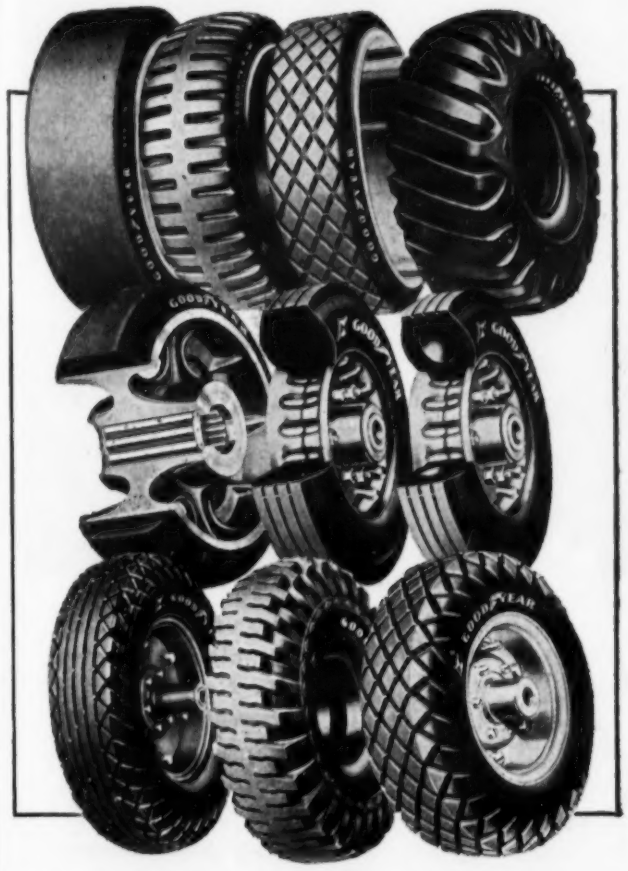
This new J-M development combines the sealing action and heat resistant qualities of asbestos with the all-around chemical resistance of Teflon. With Chempac, fewer packing styles are needed for chemical equipment because it seals against many acids, alkalies and solvents at temperatures to 500F. Chempac is recommended for packing pump rods and shafts, valve stems, agitator shafts and many other applications. This Teflon-protected asbestos packing is available from your Johns-Manville Distributor. For complete details, phone him or write Johns-Manville, Box 60, New York 16, N. Y. In Canada, 199 Bay Street, Toronto 1, Ontario.

Johns-Manville PACKINGS AND GASKETS

▲ For more details circle NED-274 A4 on enclosed inquiry slip ▲

CUT COSTS

with the right industrial tire for each job!



GOODYEAR makes a *complete* Industrial Tire line. Goodyear can promptly supply you with exactly what you need for each specific job—without resorting to expensive makeshifts.

You'll save time and money—and headaches, too—consulting with, and specifying Goodyear.

FREE TECHNICAL ENGINEERING ADVICE AND SERVICE!

To help solve your particular Industrial Tire problems, Goodyear maintains a staff of fully qualified technical experts. For their free recommendations, write: Industrial Tire Sales, Goodyear, Akron 16, Ohio.

GOODYEAR
INDUSTRIAL TIRES

We think you'll like "THE GREATEST STORY EVER TOLD" —every Sunday—ABC Radio Network
THE GOODYEAR TELEVISION PLAYHOUSE—every other Sunday—NBC TV Network

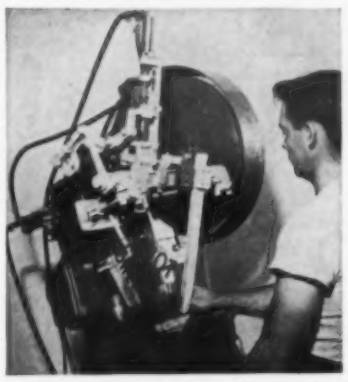
▲ For more details circle NED-275 A4 on enclosed inquiry slip ▲

SPRACO NOZZLES

Write for NOZZLE CATALOG to
SPRAY ENGINEERING CO.
106 CENTRAL STREET • SOMERVILLE 45, MASS.

For more details circle NED-276 A4 on enclosed inquiry slip

PRESS GUARD
sweeps across die area



If hands or material block the Anderson press guard, its movement is stopped and the press will not trip until the obstruction is removed and the barrier allowed to close completely. Guard is air operated and locks in closed position for press cycling. Repeat of press caused by mechanical failure or maladjustment causes the guard to clear the area of any obstruction before the first half of the downward ram stroke. On primary work or strip blanking, moving front barrier can be locked in its closed position and used with adjustable side shields which are arranged as an enclosure guard. Unit fits presses from 5 to 100 tons. Made by **Luther Mfg. Co.**, Dept. P.E., 126 E. Sullivan St., Olean, N. Y.

For more details circle NED-278 A4 on enclosed inquiry slip

TIME SWITCH
low cost model has 30-amp rating

Single-pole single-throw type B time switch has NEMA Standard 30-amp rating and list price of $13.50. It employs the same slow-speed hysteresis motor and synchronous timing mechanism as heavy-duty models and is enclosed in a gray steel case with hinged cover and sealable hasp. Ample space for wiring, four multiple knockouts and keyhole mounting slot permit speedy installation. Unit has heavy silver contacts, insulating safety shield, four levers for two "on" and two "off" operations and easily manipulated trippers. Made by **Sangamo Electric Co.**, Dept. SP, Springfield, Ill.

For more details circle NED-279 A4 on enclosed inquiry slip

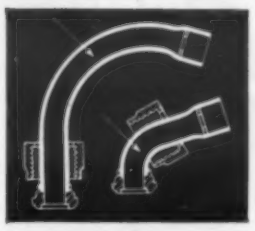
DO YOU KNOW? Complete facilities for producing tools, dies, fixtures and special machines for any industry are now housed in a new one-story air-conditioned and humidity-controlled building. Centrally located to provide fast service to customers throughout the nation, plant will ultimately employ 100 skilled tool and die makers and machinists. Service offered by Sheaffer Pen Co., Tool & Die Div., Fort Madison, Iowa.

For more details circle NED-280 A4 on enclosed inquiry slip

Tube Talk THE "HOW-TO" COLUMN

PROBLEM: To find seamless tubing that was bright, free of scale, heat-resistant, and suitable for bending and swaging by Titeflex, Inc., Newark, N.J.

Application: 90° elbow fittings of high quality for aircraft and ordnance engine applications.



SOLUTION: Superior Tube Company's 321 Stainless Steel Tubing—1/16" O.D. x .035" wall; purchased through local distributor.

RESULT: Superior 321 Stainless reduced rejections due to scaling, met rigid specifications, including bending and swaging requirements; withstood manufacturing heat of 1700°-1800°F.

Use of Superior tubing stepped up production and increased quality.

Suggestion—Write for information and literature today.

SUPERIOR TUBE COMPANY
2018 Germantown Ave., Norristown, Pa.

For more details circle NED-282 A4 on enclosed inquiry slip

FOR MEN WHO USE WIRE MESH BELTS!

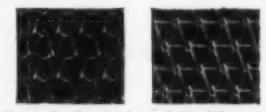
Here's why leading manufacturers specify "Cambridge" wire mesh conveyor belts.

ACCURATE CONSTRUCTION—every step of the construction of your belt is carefully controlled so that the finished belt meets specifications for size, mesh count and mesh opening. Even the welds at the edge of the belt are specially inspected to give you maximum protection at this most vulnerable part of the belt.

RANGE OF SPECIFICATIONS—whether you're handling delicate lightweight loads, such as needle bearings, or heavy, bulky parts such as automotive springs, there's a Cambridge wire belt specification to meet your needs. Even processing through heat, cold or corrosive solutions is a snap when the proper metal or alloy is chosen for fabricating your belt.

EXPERIENCED ENGINEERING SERVICE—the combination of trained engineers both in the Cambridge plant and on our Sales Staff is your assurance that the belt recommended for you is the right belt. Cambridge engineers can assist you in any phase of conveyor belt usage...conveyor design, plant layout, equipment specification, etc.

P.S. IF YOU DON'T USE WIRE MESH BELTS, you'll do well to find out how they cut costs and boost output by combining product movement with processing in your plant. For information write direct or call in your Cambridge field engineer. Look under "Belting Mechanical" in your classified telephone directory for your Cambridge man.



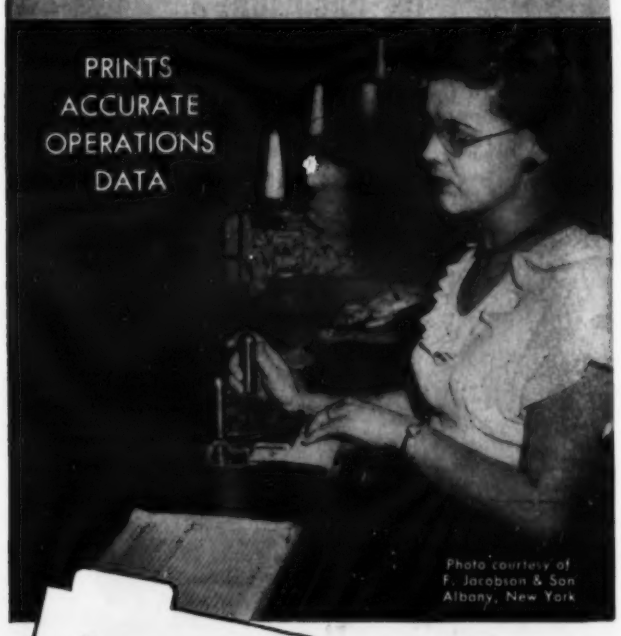
Typical Cambridge Belt Weaves, Balanced and Rod-Reinforced, are widely used for many processes which can be combined with movement.

FREE WIRE BELT MANUAL gives data on design, installations, construction. Write for your copy today.

The Cambridge Wire Cloth Co.
WIRE CLOTH · METAL CONVEYOR BELTS · SPECIAL METAL FABRICATIONS
Department C
Cambridge 1, Md.
OFFICES IN PRINCIPAL INDUSTRIAL CITIES

For more details circle NED-283 A4 on enclosed inquiry slip

Now time your jobs AUTOMATICALLY with CALCULAGRAPH!



Prints date..
starting time..
finishing time..
— and total elapsed time!

Save time and eliminate clerical errors with Calculagraph accurate-to-the-minute, printed job time records. Use these data cards for computing costs, estimating on reorders. One Calculagraph can record job time data for an entire shop or department.

NEW! AUTOMATIC DATER!
Standard on all electric models. Automatically changes date — eliminates incorrect dating of records.

ASK FOR COMPLETE INFORMATION, TODAY
Illustrated literature and sample job cards will be sent promptly on request. Just call or write Dept. 302

CALCULAGRAPH COMPANY
Sussex St., Harrison, New Jersey
STANDARD OF ACCURACY SINCE 1892

For more details circle NED-277 A4 on enclosed inquiry slip

TO GEAR MANUFACTURERS Exclusively

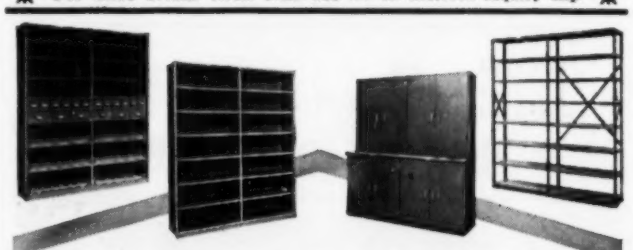
if you produce precision gears of 6" outside diameter or less your files should certainly contain full data on the HAMILTON® Precision Gear Hobber, the machine of exclusive extras.

EXTRA—Hob spindle speeds.
EXTRA—Hob spindle speed ranges.
EXTRA—Accuracy of work and hob spindles (to within .0002").
EXTRA—Rigidity, for maintenance of accuracy.
EXTRA—*Independent* selection of speed, feed, indexing.
EXTRA—Maximum accumulative error of .0002".
EXTRA—Speedy set-up and operation, extra flexibility.

Get the *complete* story. Write for FREE Bulletin GH-5312.

THE Hamilton TOOL COMPANY
901 HANOVER STREET • HAMILTON, OHIO • U • S • A

For more details circle NED-281 A4 on enclosed inquiry slip



HOW TO SAVE MONEY ON
STEEL SHELVING
The real cost of shelving is the erected cost

That's why highest quality DeLuxe shelving costs you less. DeLuxe precision shelving has *fewer parts*, uses *80% less bolts* and is the *only shelving* available that is *100% adjustable*. It's quicker, less costly to install—easier to adjust.

Wherever you are, a DeLuxe factory representative is available to give you a complete engineering, planning and layout service without obligation.

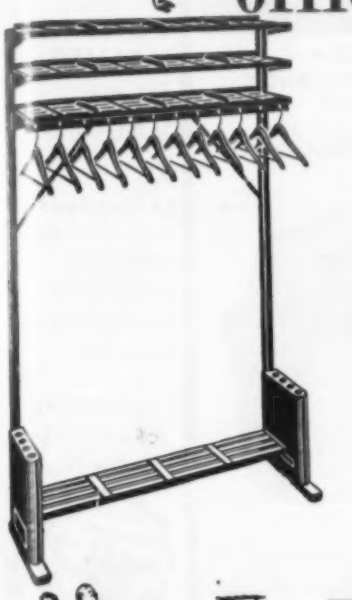
Write for a free catalog now, while your mind is on shelving.

DELUXE METAL FURNITURE CO.
305 Struthers St., Warren, Pa.
DeLuxe

For over 25 Years Manufacturers of.
Storage Shelving • Library Shelving • Storage Cabinets • Shop Equipment

For more details circle NED-284 A4 on enclosed inquiry slip

The OFFICE VALET



Reduce Absenteeism —keep employees' wraps dry, aired, and in press

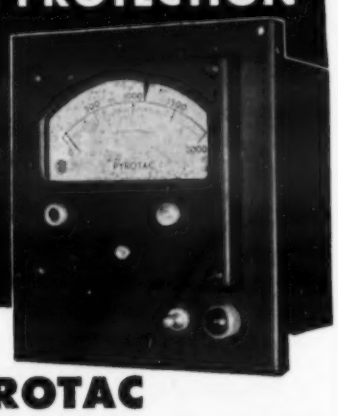
With Office Valet wardrobe equipment employees do not face weather in damp-clothing that has been crumpled in lockers, do not eat soggy lunches soaked by wet hats or mittens. The 4 foot 3-U rack, illustrated, accommodates 12 employees with spaced coat hangers, individual hat spaces, umbrella racks and overshoe shelf. Other units with or without lock boxes, in sizes and capacities for every office and factory need.

WRITE FOR BULLETIN OV-8

VOGEL-PETERSON CO.
1121 West 37th St. • Chicago 9, Ill.

▲ For more details circle NED-285 A4 on enclosed inquiry slip ▲

AUTOMATIC PROTECTION OR CONTROL for your heating process



...WITH ALNOR PYROTAC

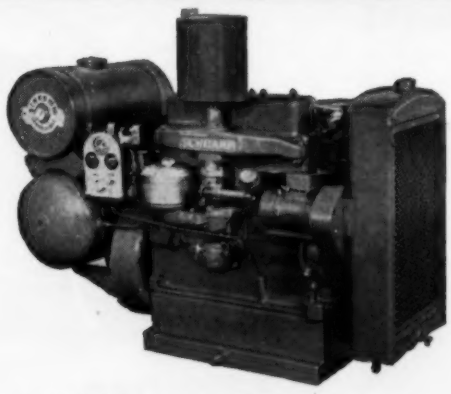
Here's a simple, low-cost way to obtain *AUTOMATIC PROTECTION* against damage due to excessive temperatures . . . safeguard your investment in heating equipment and materials in process. This precision-built instrument constantly indicates temperature of the heated equipment and sounds an alarm and/or shuts down the heated circuit at a safe, pre-set temperature. It may also be used as a *CONTROLLER* on a process requiring shutdown upon reaching a final process temperature—such as ceramic kilns, molds, etc. Automatic thermocouple break protection assures safety if couple or extension wires should break.

Ask your Alnor representative for details on this sturdy, precise instrument. You'll find the price of less than a hundred dollars unusual for an instrument of this type. Write for bulletin that contains complete description and wiring diagrams of actual applications. Illinois Testing Laboratories, Inc., Room 529, 420 N. LaSalle Street, Chicago 10, Ill.

Alnor PRECISION INSTRUMENTS FOR EVERY INDUSTRY

▲ For more details circle NED-286 A4 on enclosed inquiry slip ▲

AIR FOR SHOP OR MAINTENANCE...



Model 60-C.F.M. Complete engine driven stationary air compressor mounted on base (no foundation required).

AN IDEAL COMBINATION FOR...

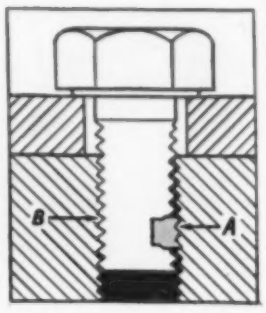
- **GENERAL SHOP UTILITY WORK**
  Paint Sprays, Riveting Guns, Impact Wrenches, Grinders, Sanders, etc.
- **FOR OUTDOOR MAINTENANCE**
  Rock Drilling, Paving Breaking, Demolition, Trench Digging, Backfill Tampers, etc.

WRITE FOR BULLETIN AED

SCHRAMM, INC.
WEST CHESTER, PA.

▲ For more details circle NED-287 A4 on enclosed inquiry slip ▲

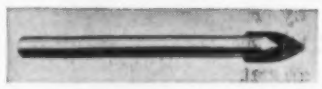
SELF-LOCKING FASTENERS
bolts and screws resist vibration



Resilient nylon insert (A) of these self-locking bolts and screws is permanently located in one side of the threaded area to produce a transverse thrust. This creates a strong metal-to-metal engagement of mating threads on the opposite side (B). Locking action resists vibration and will not shake loose. Galling, thread distortion and surface mutilation are eliminated. Where liquids are involved, leakproof seal is provided. Made by **Nylok Corp.**, Dept. 122, Elmira Heights, N. Y.

▲ For more details circle NED-288 A4 on enclosed inquiry slip ▲

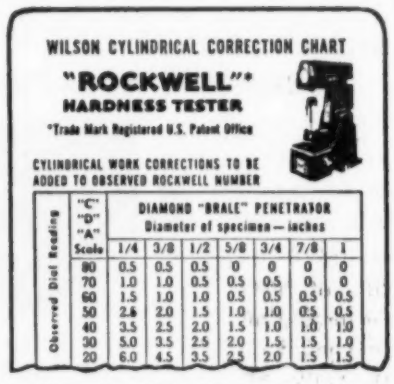
CARBIDE TILE DRILL
nine sizes from 1/8 to 5/8-in.



An extra long carbide spear point brazed in slotted steel shank is feature of this carbide tile drill available in 9 sizes from 1/8 to 5/8-in. Drill is designed for use in power hand tools and requires no lubricants or coolants. It gives fast penetration and cuts clean holes, free of spalling and chipping, in porcelain, ceramic, tile, marble, building tile and similar hard, fragile materials. Made by **Super Tool Co.**, 21640 Hoover Rd., Detroit 13, Mich.

▲ For more details circle NED-289 A4 on enclosed inquiry slip ▲

HARDNESS CHART
corrects readings made on rounds



WILSON CYLINDRICAL CORRECTION CHART
"ROCKWELL"* HARDNESS TESTER
*Trade Mark Registered U.S. Patent Office

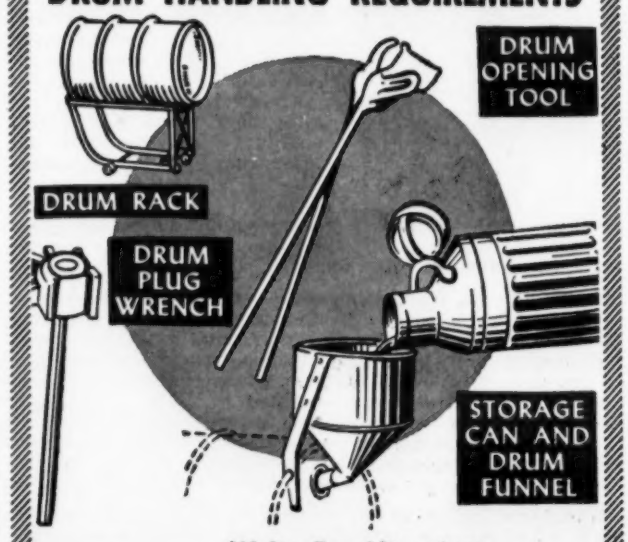
CYLINDRICAL WORK CORRECTIONS TO BE ADDED TO OBSERVED ROCKWELL NUMBER

Observed Dial Reading "C" "D" "A" Scale	DIAMOND "BRALE" PENETRATOR Diameter of specimen — inches 1/4	3/8	1/2	5/8	3/4	7/8	1
80	0.5	0.5	0.5	0	0	0	0
70	1.0	1.0	0.5	0.5	0.5	0	0
60	1.5	1.0	1.0	0.5	0.5	0.5	0.5
50	2.5	2.0	1.5	1.0	1.0	0.5	0.5
40	3.5	2.5	2.0	1.5	1.0	1.0	1.0
30	5.0	3.5	2.5	2.0	1.5	1.5	1.0
20	6.0	4.5	3.5	2.5	2.0	1.5	1.5

Lower Rockwell hardness numbers obtained in checking cylindrical surfaces can be corrected so that numbers correspond to readings obtained on flat surfaces by use of the pocket-size cylindrical correction chart for rounds. Reason for lower reading is that less material is contacted by the penetrator on a round surface. Chart indicates corrections to be added to hardness values. It is made of celluloid stock, is 2½ x 5¼ in. and has correction numbers for Rockwell normal model (C, D and A scale and B, F and G scale) and Rockwell superficial (15N, 30N, 45N and 15T, 30T and 45T). Available free from **American Chain & Cable Co.**, Wilson Mechanical Instrument Div., Dept. NED, 230 Park Ave., New York 17, N. Y.

▲ For more details circle NED-290 A4 on enclosed inquiry slip ▲

SAFETY EQUIPMENT FOR ALL INDUSTRIES
to better serve your
DRUM HANDLING REQUIREMENTS



Write For Literature

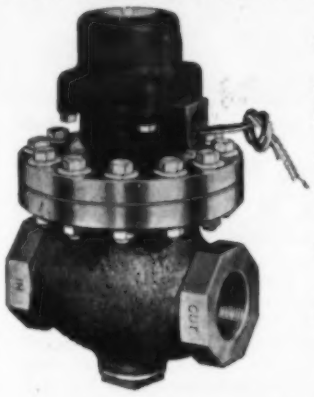
IPCO Safety Equipment for all Industries
INDUSTRIAL PRODUCTS COMPANY
2807 N. FOURTH STREET PHILADELPHIA 33, PA.

▲ For more details circle NED-291 A4 on enclosed inquiry slip ▲

Atkomatic SOLENOID ELECTRIC High Pressure Valves

free Bulletin

FOR REMOTE or AUTOMATIC CONTROL



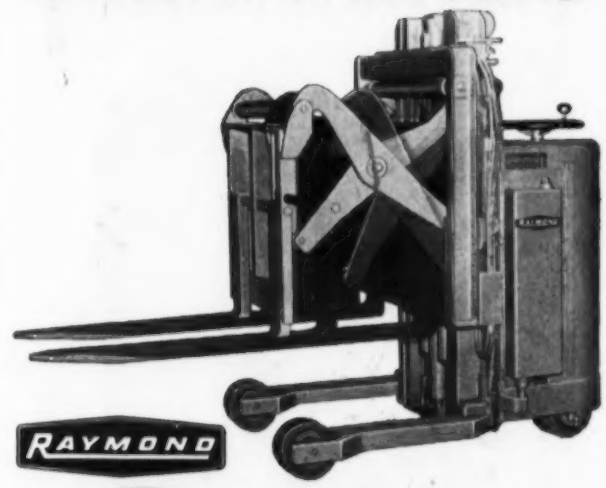
- Sizes ½, ¾, 1, and 1½ inches.
- Pressures to 3,000 psi.
- Full ported, rugged, dependable.
- No external linkage, operates with only three moving parts, reduces valve maintenance.
- For use with any media not harmful to bronze or stainless steel.
- Easily maintained, all parts accessible without removing valve from line.

Write for more complete information

ATKOMATIC VALVE COMPANY
545-B ABBOTT STREET • INDIANAPOLIS 25, INDIANA

▲ For more details circle NED-292 A4 on enclosed inquiry slip ▲

This is it...
The truck with the
"BOARDING HOUSE REACH"



RAYMOND Reach-Fork* TRADE MARK

Imagine it . . . a truck that permits close-quarter operation in every warehouse in America! Only the RAYMOND Reach-Fork performs this space-making miracle. Because only the Reach-Fork has "boarding-house reach." It's another great truck from the firm that 3 years ago made 6-ft. aisles a reality!

FORKS REACH RIGHT OUT to pick up or deposit your load . . . extend 24" and back in seconds. No need to change your existing rack set-up.

HANDLES ANY SIZE PALLET . . . one truck handles pallets of any size without any changes in the truck.

STACKS PALLETS CLOSELY . . . ideal for loading and unloading motor trucks and boxcars, or for rack storage use.

TIERS FROM 6-FT. AISLES in any warehouse thanks to Reach-Forks, short length and patented** off-set drive wheel with 200° turning arc.

DOUBLES YOUR STORAGE by trimming 4 to 6 ft. off conventional tiering truck aisles.

*PATENT PENDING **PATENT NO. 2,564,002

MAIL THIS COUPON Learn how RAYMOND's Reach-Fork can produce dollar-and-space savings right in your own warehouse!

The RAYMOND CORPORATION
4120 Madison St., Greene, N.Y.

Please send me Bulletin describing your new Reach-Fork Electric Tiering Truck.

NAME_____ TITLE_____
COMPANY_____
STREET_____
CITY_____ STATE_____

▲ For more details circle NED-293 A4 on enclosed inquiry slip ▲

CYCLOTHERM carries entire steam load of conventional boiler *in 1/4th the space*

Walter A. Johnson, Momence (Ill.) Greenhouses, says this about his 50 hp Cyclotherm . . .

"SAVINGS IN FUEL AND MAINTENANCE WILL PAY FOR THIS BOILER IN A FEW MONTHS"

For saving space, fuel, maintenance and money, nothing equals Cyclotherm Steam or Hot Water Generators. Completely packaged units ready to operate on arrival.

Burn oil, gas or combination. Save space of conventional units. Simple flue — no brickwork. Fully automatic controls. Underwriter approved. Exclusive, patented Cyclotherm cyclonic combustion principle—*from cold start to full power in 15 minutes.* Sizes 18 to 500 hp, 15 to 200 psi. Write for free literature: Dept. 40

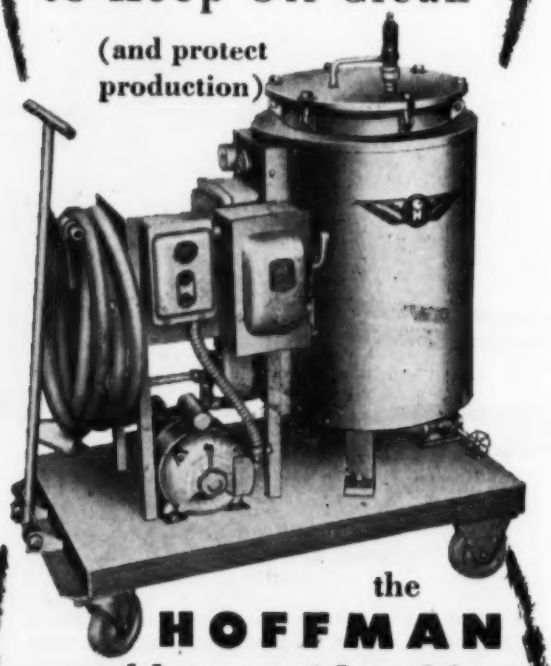
CYCLOTHERM® STEAM GENERATORS
CYCLOTHERM DIV. UNITED STATES RADIATOR CORP.—OSWEGO, N. Y.

▲ For more details circle **NED-294 A4** on enclosed inquiry slip ▲

GOES ANYWHERE

to Keep Oil Clean

(and protect production)



the HOFFMAN portable cartridge filter

Fills the need for periodic, scheduled filtration of oils where quantity does not warrant separate, continuous filtration. Easily moved from one machine to another. Flexible hose with quick connecting couplings attaches to the oil supply of the machine. Operates on a recirculation basis for such time as is required to fully recondition the oil. For use on hydraulic oils (hydraulic presses, hydraulic machine tools, injection moulding machines, die casting machines) and quench oils. Two sizes: 30 and 60 g.p.h. capacities for repackable or throwaway cartridges. Fuller's earth or cellulose.

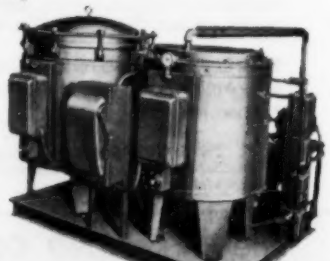
Write for Bulletin A-916 today.

For Complete Purification of Used Oils —

HOFFMAN OIL CONDITIONER

25 to 600 g.p.h. capacity
Removes solubles and insolubles

Write for free Bulletin A-974



Hoffman
INDUSTRIAL FILTRATION EQUIPMENT & SERVICE
U. S. HOFFMAN MACHINERY CORP., 225 LAMSON STREET, SYRACUSE 6, N. Y.
In Canada: Canadian Hoffman Machinery Co., Ltd., Newmarket, Ont.

▲ For more details circle **NED-295 A4** on enclosed inquiry slip ▲

FILING CABINETS
for housing vertical visible records

Designed to house Diebold Tra-Dex Vertical-Visible record systems, redesigned filing cabinets are available in both one and two-tier styles. The one-tier model is available at less cost than former units of same capacity, and both incorporate various functional improvements. Made by **Diebold, Inc.,** Dept. EF, Canton 2, O.

▲ For more details circle **NED-296 A4** on enclosed inquiry slip ▲

SELF-PRIMING PUMPS
nine new models available

Line of vertical self-priming pumps has been extended by addition of nine models in 1½ and 2-in. sizes with 1/3 to 1½-hp ratings and capacities up to 120 gpm. These units are available with single or three-phase open or explosionproof motors. They incorporate the design features of the 14 models previously available, including self-priming capacity even on suction lifts and a drip-eliminating self-lubricating shaft seal. Made by **Marlow Pumps,** 590 Greenwood Ave., Ridgewood, N. J.

▲ For more details circle **NED-297 A4** on enclosed inquiry slip ▲

SHAKER CONVEYORS
adapted to hot and abrasive material

Suitable for handling hot or abrasive materials as well as a wide range of other materials, line of heavy duty reciprocating shaker conveyors includes models for distances up to 500 ft. Units are lightweight, portable and quickly assembled. A choice of 10, 15 or 20-hp electric motors or 10 or 25-hp air motors is available. Units can be installed in limited headroom and have a normal capacity of 100 tons per hour. Trough sections range from 12 to 36-in. wide, 6 to 16-ft long and 6 to 18-in. deep and angles are available. Internal parts are lubricated by a splash and trough system and external parts are pressure lubricated. Made by **Goodman Mfg. Co.,** Dept. IMD-38, Halsted & 48th Sts., Chicago 9, Ill.

▲ For more details circle **NED-298 A4** on enclosed inquiry slip ▲

NEW DEPRESSED CENTER WHEELS
reduce cost of roughing, weld grinding, cutting off and slotting

Fast, safe grinding at low cost on the roughest jobs—that sums up the story of new CARBOFLEX Depressed Center Wheels by CARBORUNDUM. Some typical applications where this strong, reinforced wheel has proved its superiority include: undercutting and reducing heavy welds, roughing off fins and sharp edges, notching and cutting off gates and risers, removing surface defects, and general purpose roughing, slotting and cutting off.

The CARBOFLEX Wheel is an entirely new and effective combination of tough, top-quality abrasive grain and a strong, reinforced bond. The result is a depressed center wheel with extra-high cutting ability plus extremely high strength and resistance to cracking. Tests prove that too much reinforcing material lowers cutting effectiveness—too little is unsafe. CARBOFLEX Depressed Center Wheels achieve the most effective balance ...with enough reinforcement to hold the wheel together at recommended operating speeds even should it inadvertently become cracked...yet without sacrificing cutting ability.

An exclusive feature of the CARBOFLEX Wheel is the knurled back, which permits the operator to cut with both sides and the edge with no initial dressing.

Try CARBOFLEX Depressed Center Wheels on your toughest jobs. Call our Distributor or Salesman, listed in the yellow pages under "Abrasives" or "Grinding Wheels." Or, if you prefer, use the inquiry form provided by this publication—or write Dept. NED 81-42, **The Carborundum Company,** Niagara Falls, New York.

"Carborundum" and "Carboflex" are registered trademarks of The Carborundum Company, Niagara Falls, New York

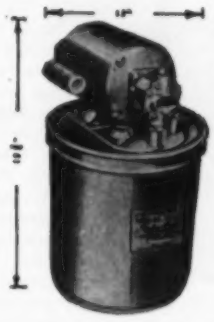
81-42

▲ For more details circle **NED-299 A4** on enclosed inquiry slip ▲

MODERN *air fluid* POWER

SERIES DU-
LOW PRESSURE HYDRAULIC PUMPING UNIT
Recommended For Equipment *Modernair*

- 200 PSI
- 2½ GALLONS PER MIN.
- 5 GAL. RESERVOIR WITH AIR BREATHER
- 115/230 VOLT A.C. 1/3 HP MOTOR WITH CAPACITOR
- WEIGHT: 35 LBS.



CYLINDERS
CONTROL VALVES
PILOT VALVES

All components required for complete automatic and sequence circuits:

Engineering of control circuits

WRITE FOR CATALOG
STOCKS IN PRINCIPAL CITIES

Modernair **CORPORATION**
400 PRIOR STREET · SAN LEANDRO · CALIFORNIA

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STAMPINGS
PILOT RUNS

Special methods produce small quantities at minimum cost.

When you need just a few pieces—when you're still in the experimental stage — then an economical, cooperative source of parts is important.

Our **Machine-Cut Method** avoids custom die costs completely by use of special machinery which skillfully fashions pilot quantities.

Careful calculation determines the point at which labor costs warrant our **Short Run Method,** which uses simple contour dies and special presses.

Best of all, when you get into large quantities on the experimental part, our STAMPINGS DIVISION is still your most economical producer, using our **Production Method.** Thus all three methods are at your disposal. And impartial choice of method *saves money* for you!

SEND FOR LITERATURE

STAMPINGS DIVISION
"ONE PIECE OR ONE MILLION"

LAMINATED SHIM COMPANY, INC.

2301 UNION STREET · GLENBROOK, CONNECTICUT

▲ For more details circle **NED-301 A4** on enclosed inquiry slip ▲

How cost-wise buyers rate
STANDARD STOCK GEARS

IN STOCK AT 92 BOSTON GEAR DISTRIBUTORS at Factory Prices

Look under "Gears" in the Yellow Classified Section of your Telephone Directory for the one nearest you.

Get the 384-page BOSTON Gear Catalog . . . industry's most valued "textbook" of drive design and maintenance. Ask your BOSTON Gear Distributor, or write Boston Gear Works, 69 Hayward St., Quincy 71, Mass.

▲ For more details circle **NED-302 A4** on enclosed inquiry slip ▲

PAPER TOWEL DISPENSER
reduces cost up to 40%

Westroll Towels in Micromatic Towel Dispensers reduce towel waste to an absolute minimum. Their design takes human nature into account. People will take just enough toweling and no more when they have to crank it out by hand. Tests show Westroll users average only 17 inches of paper, against 22, 33 or even 44 inches of interfold or flat towels. Users can crank out exactly the amount of towel necessary; as little as two inches for the removal of women's lipstick, for example.

There are also savings in maintenance. One filling of the Westroll Cabinet is equivalent to four fillings of ordinary flat towel dispensers. Here's an immediate saving in costly janitors' time. The Westroll dispenser has relatively few working parts; its maintenance is negligible. Westroll dispensers are loaned and maintained by West. They are easy to keep clean and help keep washrooms spic and span and free from litter.

Westroll paper towels, made especially for these cabinets, are of uniform high quality. Tested and retested during manufacture, they are exceptionally strong and absorbent. Packed 16 rolls to the case, each case contains sufficient toweling for approximately 10,000 single sheet dryings.

Write for folder and more information. **West Disinfecting Company,** Dept. 16, 42-16 West Street, Long Island City 1, N. Y. —*Advt.*

▲ For more details circle **NED-303 A4** on enclosed inquiry slip ▲

GREASE . . . OIL . . . WATER . . . ICE . . .

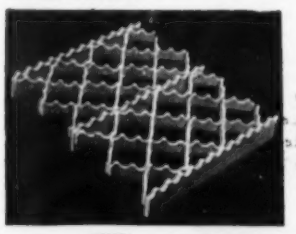
YET NO SKIDDING or SLIPPING

Bustin FIRM-GRIP

SAFETY GRATING

for floors, steps, platforms, ramps, ladders, etc.

Now . . . cut down accidents and lost manhours caused by slips, skids and falls. Install Bustin Firm-Grip — the new anti-slip grating that eliminates dangerous walking conditions . . . guarantees sure footing . . . and is so easy to maintain.



*Pat. Pending

Write for Complete Literature

Bustin FIRM-GRIP GRATING CORP.

Dover, New Jersey Dover 6-8800

"BUSTIN—Designers and Manufacturers of Metal Products Since 1928"

▲ For more details circle **NED-304 A4** on enclosed inquiry slip ▲

Eliminate errors... measure tension Accurately!

When you equip your shop or laboratory with Apco Mossberg Torque Screw Drivers, testing or measuring final tension on precision fasteners is quicker...easier...and infinitely more accurate. Here's why.

Apco Torque Drivers are especially designed for maximum convenience, precision performance. Large, easy-to-read dials assure instantaneous measurements. Lighter, stronger construction makes them easy to handle . . . simple to operate. There are no springs or delicate parts to get out of kilter.

What's more, every Apco driver—from the 0 to 6 in. oz. size to the 0 to 24 in. oz. models with large positive and positive-negative dials—comes complete with a standard Stanley tool holder to accomodate interchangeable bits. With an Apco Driver, you can tighten or test torque on *all* types of fasteners—including light plastic screws.

Get the full facts on Apco Mossberg Torque Tools today! Contact your distributor or write direct. Apco Mossberg Co., 161 Lamb Street, Attleboro, Mass., U.S.A.

APCO MOSSBERG CO.

ATTLEBORO, MASS.

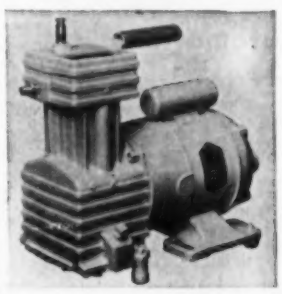
▲ For more details circle **NED-305 A4** on enclosed inquiry slip ▲

MAGNETIC SWEEPER
in 48, 60, 72 and 96-in. widths

Permanent Alnico magnets are used in the Homer magnetic road sweeper which is available with effective sweep widths of 48, 60, 72 and 96 in. Each model is equipped with receptable in which recovered tramp metal can be stored until the end of the sweep, and each has a trailer hitch for easy attachment to the towing vehicle. Made by **Homer Mfg. Co.,** Dept. 124, Lima, O.

▲ For more details circle **NED-306 A4** on enclosed inquiry slip ▲

AIR COMPRESSOR
portable unit rated at ½-hp



Delivery of 4.5 cfm at 45 psi pressure is rating of heavy duty model 45 ½-hp portable air compressor. It is equipped with a NEMA 66-frame, 1750-rpm ball bearing motor and four replaceable valve assemblies. Same valve unit can be used in either intake or exhaust ports. Splash lubrication is incorporated. Complete unit weighs 72 lb, has rubber feet and is equipped with a large nonheating handle for carrying by one man. Made by **Sharpe Mfg. Co.,** 1226-A Wall St., Los Angeles 15, Calif.

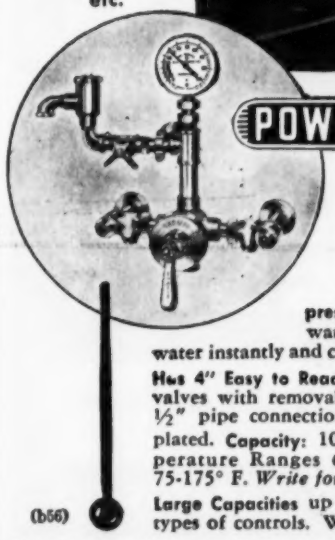
▲ For more details circle **NED-307 A4** on enclosed inquiry slip ▲

INDUSTRIAL TRUCKS
fitted with centralized lubrication

Industrial trucks are now available fitted with Centro-Matic centralized lubrication system. This insures complete lubrication of all points with minimum effort, and also prevents over-lubrication and wastage. An injector for each lubrication point is connected to the bearing by tube and receives its supply of grease under about 2500 psi from the central pumping unit. Injectors measure out a set amount of grease, and are provided with a visible indicator to show proper metering. Various Lincoln pumping units can be used, including a manually operated unit permanently attached to the truck. Information is available from **Elwell-Parker Electric Co.,** 4502 St. Clair Ave., Cleveland 3, O.

▲ For more details circle **NED-308 A4** on enclosed inquiry slip ▲

Most ACCURATE Water Temperature Control Made for Industrial Processes Color Photo Film Processing, Lens Polishing Hydrotherapy, etc.



POWERS THERMOSTATIC WATER MIXER

Supply Fixture 4629PD, used above by AUTHENTICOLOR Laboratories, N.Y. City, thermostatically mixes hot and cold water and delivers the mixture at any constant temperature desired—regardless of **pressure** or **temperature** changes in water supply lines. Failure of cold water instantly and completely shuts off the delivery.

Has 4" Easy to Read Dial Thermometer, stop check valves with removable strainers, vacuum breaker, ½" pipe connections, and is completely chrome plated. **Capacity:** 10 gals. per min. at 45 psi. Temperature Ranges 65-115° F.; 60-125° F.; and 75-175° F. *Write for Bulletin 367.*

(b56) **Large Capacities** up to 1000 gpm available in other types of controls. Write for Catalog WC.

THE POWERS REGULATOR CO., SKOKIE, ILL.
Offices in over 50 Cities, see your Phone Book • Established in 1891

▲ For more details circle **NED-309 A4** on enclosed inquiry slip ▲

NOW! AN IMPROVED **LOW COST CASTER**
with Hardened Raceways Unbreakable Fork and Top Plate

SERVICE PRESSWELD CASTERS

STRONG! AGILE! QUIET!

Here, at last, is a truly efficient, light-weight caster in the low-cost field. Ideal for Dollies, Racks, Box Trucks and similar applications in the moderate capacity range. Many features usually found only in high price casters provide for years of trouble-free performance. Get PressWelds — and get SERVICE quality at low cost.

Write for sizes, capacities and low prices

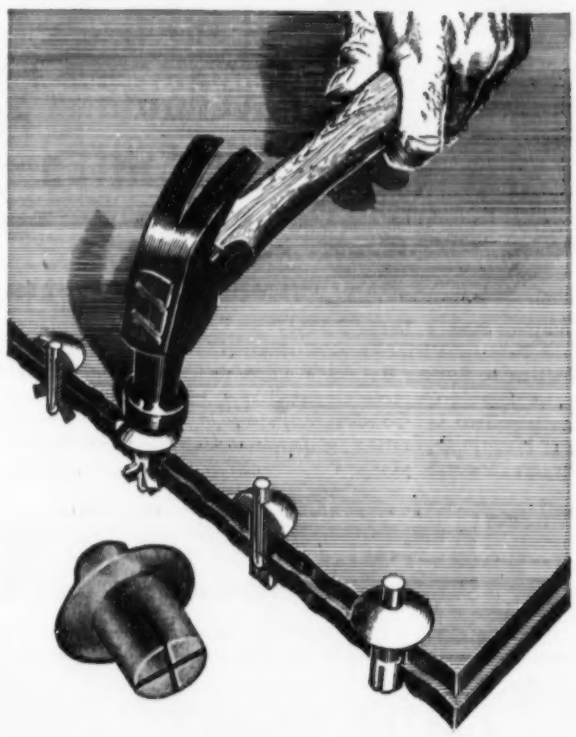
INDOORMILES Made BOLDER and SUPER

SERVICE CASTER & TRUCK CORP.
Executive Offices: Albion, Michigan
Plants at Albion, Michigan & Somerville 43, Mass.

See your Classified Telephone Directory for Nearest Distributor

▲ For more details circle **NED-310 A4** on enclosed inquiry slip ▲

WHAT IS A "BLIND" RIVET?



It is a type of fastener used to rivet together two or more pieces of material when access to the work is possible from only one side.

But SOUTHCO "Blind" Drive Rivets do much more than that. They provide maximum strength and reduce production costs. For installation you just hit the pin . . . and the rivet is in. At the same time, a powerful pull-up force is exerted to produce the kind of a tight joint you get when a

There is no finishing operation required with SOUTHCO Rivets, no wasted material, no noise, no special tools to buy or maintain. Fastening metal parts is as simple as driving a nail.

FOR EITHER BLIND OR ACCESS APPLICATIONS

Even when there is access to both sides, SOUTHCO Drive Rivets are specified because they make a one-man job of a two-man operation. They are so simple that costs are reduced through faster riveting.

For the full story on SOUTHCO Drive Rivets, write to Southco Division, South Chester Corporation, 1413 Finance Building, Philadelphia 2, Penna.

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Pat. No. 2640618
Other Pats. Pend.
Rivet and Mfg.

SOUTHCO FASTENERS

PAWL, SCREW AND SPRING • DRIVE RIVETS
ANCHOR NUTS • ENGINEERED SPECIALTIES

OFFICES IN PRINCIPAL CITIES

WHEREVER TWO OR MORE PARTS ARE FASTENED TOGETHER, STANDARD AND SPECIAL DESIGNS FOR IMPROVED PERFORMANCE AND LOWER PRODUCTION COSTS.

▲ For more details circle **NED-311 A4** on enclosed inquiry slip ▲

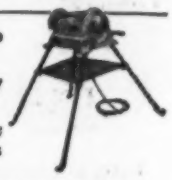
new

TOLEDO 88

POWER DRIVE

for operating hand pipe threaders, cutters, reamers

BETTER...STRONGER...MORE POWERFUL



- Fast . . . rugged . . . efficient . . . saves time and muscle!
- Light weight . . . aluminum housing . . . easy to carry about!
- Capacity—⅛" to 2" pipe, ¼" to 1½" bolts; with universal drive shaft, geared die stocks and cutters up to 12".

See it . . . try it! Write for new catalog. Order through your supply house. The Toledo Pipe Threading Machine Co., Toledo, Ohio. New York Office: 165 Broadway, Room 1310.

Rely on the Leader . . . all the way! TOLEDO

PIPE TOOLS • POWER PIPE MACHINES • POWER DRIVES

For more details circle NED-312 A4 on enclosed inquiry slip

IT'S A Beauty!

SQUARE D REVERSING DRUM SWITCH

WITH A LOT OF IMPORTANT FEATURES

Compact Size • Large Screw type Terminals • Replaceable Terminal Blocks • Convertible from Maintained Position to Spring Return • Positive Shock-proof Indexing • Single Captive Cover Screw • Generous Wiring Space • Two ½" Conduit Openings at Bottom • Front or Rear Handle Operation • Large and Legible Nameplate

Write for Bulletin 2601-A, Square D Company, 4041 N. Richards St., Milwaukee 12, Wis.

ASK YOUR ELECTRICAL DISTRIBUTOR FOR SQUARE D PRODUCTS

SQUARE D COMPANY

For more details circle NED-313 A4 on enclosed inquiry slip

NEW SLIDE CHART

on *Carpenter* Stainless Steels

gives you information to help you select the proper Stainless for

Drawing	Machining
Forging	Riveting
Heading	Roll Forming, etc.

This new Carpenter chart also contains valuable data on the physical constants of many Stainless grades. For your copy, just return the coupon.

THE CARPENTER STEEL COMPANY
118 W. Bern St., Reading, Pa.

Please send me a copy of the new Carpenter Stainless Slide Chart.

NAME _____ TITLE _____
(Please Print)

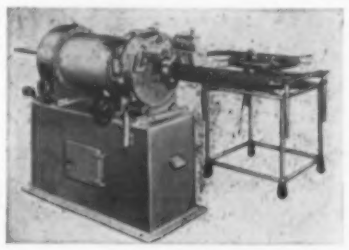
COMPANY _____

ADDRESS _____

CITY _____ ZONE _____ STATE _____

For more details circle NED-314 A4 on enclosed inquiry slip

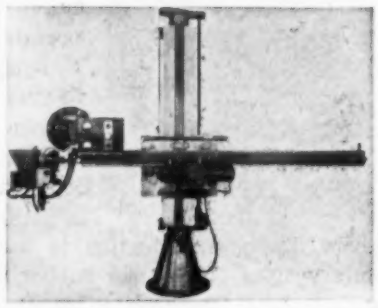
TUBE FINNING MACHINE
for ¼ to 4-in. stock



Tube finning machine applies fins to tubing from ¼ to 4-in. diameter for heating, cooling and air-conditioning installations. In this size range, tubing fabricated from any metal such as copper, aluminum or steel can be finned with any combination of similar or dissimilar metals. Machine operates by winding desired strip metal around the tube on a vertical axis with any desired fin spacing. It will produce any length tube, a typical rate of operation being 10 fpm. Made by **United Machinery Sales Co.**, Dept. PL, 2351 N. St. Louis Ave., Chicago 47, Ill.

For more details circle NED-315 A4 on enclosed inquiry slip

WELDING FIXTURE
ram-type unit is automatic



Ram-type model CB 6x6 automatic welding fixture has a tubular lateral ram to which is attached the automatic head traveling 6 ft 6 in. over the positioned or rotating work. Variable speed drive provides welding speed range of 0 to 100 ipm. Motorized vertical adjustment ranges from 13 in. to 6 ft. The tubular column containing counterweight and ram rotates through 360 degrees. Unit can be mounted on a carriage to travel longitudinally on special track of any length at speeds from 0 to 100 ipm. Welding generators and flux recovery equipment can be mounted on the carriage. Controls are centralized in a small hand pendant. Standard units with larger lifts and travels are also available. Made by **C. B. Herrick Mfg. Corp.**, 2001 Center St. N.W., Cleveland 13, O.

For more details circle NED-316 A4 on enclosed inquiry slip

DO YOU KNOW? Ultra-sonics, the inaudible sound phenomenon, is now being employed to catch burglars, detect fires or smoke and prevent unauthorized intruders from entering an area. The Alertronic system uses four nickel rods to generate ultrasonic vibrations. Receiver picks up these waves. Anything which disturbs these waves causes receiver to generate electricity and sound an alarm. Sensitivity is adjustable to detect presence of any body or it can be tuned so that a deep breath, wiggling finger or motion of air caused by fire or heat will actuate signal. Developed by Alertronic Corp., 48-13 Van Dam St., Long Island City, N. Y.

For more details circle NED-317 A4 on enclosed inquiry slip

BIN STUCK LATELY?

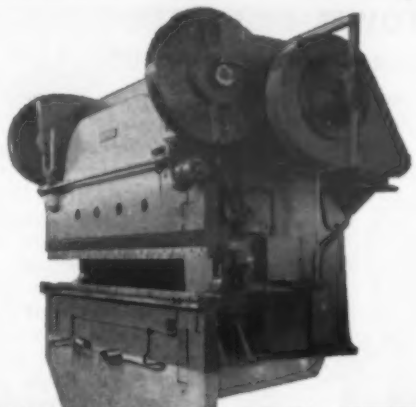
Loosen it Up—with a CLEVELAND AIR Vibrator

"Write for our new catalog No. 109."

THE CLEVELAND VIBRATOR CO.

2744 Clinton Avenue • Cleveland 13, Ohio

For more details circle NED-318 A4 on enclosed inquiry slip



CINCINNATI ALL-STEEL PRESS BRAKES

feature center line construction motorized ram adjustment with micrometer registers at each end, automatic lubrication weld free joints and other profitable features.

Write for Catalog B-4

THE CINCINNATI SHAPER CO.
CINCINNATI 25, OHIO, U.S.A. SHAPERS • SHEARS • BRAKES

For more details circle NED-319 A4 on enclosed inquiry slip

tools that Streamline electrical maintenance

FOR ELECTRONIC TROUBLE SHOOTING

WESTON Model 785
Industrial Circuit Tester

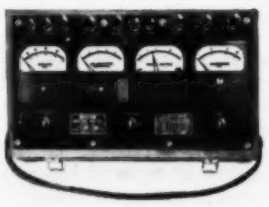
A multi-range, multi-purpose, ultra-sensitive analyzer, for laboratory and industrial checking of electrical and electronic circuits. Has 28 practical scale ranges; measures d-c and a-c voltage, d-c and a-c current, and resistance. Accessories available to extend ranges. Compact and portable; oak or steel case.

FOR MOTORIZED EQUIPMENT

WESTON Model 633
Clamp Volt-Ammeter

For convenient and rapid measurement of a-c voltage and current without breaking the circuit. Jaws take insulated or non-insulated conductors up to 2" diameter. Has 6 position thumb switch for range selection, and adjustable pointer stop for measuring motor starting current. Also available as a-c clamp ammeter, without voltage ranges.

FOR POWER PROBLEMS



WESTON MODEL 639
A-C Industrial Analyzer

A combination Voltmeter, Wattmeter, Power Factor Meter, Ammeter with all interconnections made. Only one hook-up required to measure a-c current, voltage and power in single and polyphase circuits, and power factor in 3 phase, 3 wire balanced circuits. Adequately insulated binding posts, high overload capacity.

AVAILABLE THROUGH LEADING DISTRIBUTORS

WESTON Instruments

WESTON Electrical Instrument Corporation
614 Frelinghuysen Avenue, Newark 5, New Jersey

For more details circle NED-320 A4 on enclosed inquiry slip

Keep cranes in service Cut maintenance costs

this booklet tells how

● This informative booklet on U·S·S Special Crane Rails and Fastenings can help you reduce crane and runway maintenance costs. It describes our three Special Crane Rail Sections—which were designed to give longer service under heavy wheel loads—and shows a special technique of tight-joint-assembly which, when combined with a new conception of "floating-rail" fastening, will result in fewer delays in crane operation and less maintenance expense.

To get your copy, just send your name and address to United States Steel Corporation, Room 4201, 525 William Penn Place, Pittsburgh 30, Pa.

U·S·S SPECIAL CRANE RAIL SECTIONS USS

UNITED STATES STEEL

▲ For more details circle NED-321 A4 on enclosed inquiry slip ▲

Specify MEYERCORD DECAL Transfers

—for difficult highly-specialized applications

—for long day-after-day production runs—

Meyercord Laboratory and Production Experience —PLUS Unexcelled Service—to Serve You *Better!*

Sometimes we are too prone to tell our friends about the spectacular achievements of Meyercord in solving those "impossible" decal transfer applications . . . like the new E-51 aircraft decals that resist up to 900 degree temperatures of jet engines, as well as the ravages of strong solvents and aircraft fuels. Specialized decal applications are a mighty important part of our business . . . but we're still first and foremost in the business of supplying standard Meyercord nameplate and identification decals. Whether you make typewriters, appliances, electrical conduit . . . any product that is turned out on long-time production runs, be sure to investigate the advantages of Meyercord decal transfer *uniformity, fine quality and absolutely unbeatable service* on your production line.

Send for This Manual of MEYERCORD DECAL NAMEPLATES

Shows hundreds of uses for durable, washable decal nameplates . . . as trademarks, instruction charts or diagrams—in any size, colors, or design. This manual is FREE...request it on your business letterhead, please.

THE MEYERCORD CO.
World's Largest Decalcomania Manufacturers
DEPT. N-316
5323 WEST LAKE ST.
CHICAGO 44, ILLINOIS

▲ For more details circle NED-322 A4 on enclosed inquiry slip ▲

The FRIENDLY HAND of HYSTER SERVICE

assurance that your job keeps going —wherever it is!

Your Hyster Lift Truck won't need service often, but when it does, one of the more than 700 Hyster Dealers throughout the world is within easy servicing distance. HE KNOWS YOUR MATERIALS HANDLING JOBS MUST KEEP GOING! You can depend on your Hyster Dealer to place the *right* industrial truck (1,000 to 30,000-lb. capacity) and attachment on your job...for a continuous, profitable lift truck operation. Call your Hyster Dealer today, or write for Catalog 1277.

HYSTER COMPANY | 2906 N. E. Clackamas, Portland 8, Ore. 1012-06 Myers Street, Danville, Illinois

FOUR FACTORIES: Portland, Oregon; Danville, Illinois; Peoria, Illinois; Nijmegen, The Netherlands

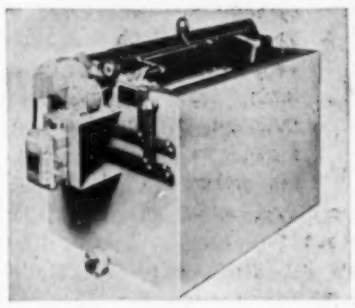
▲ For more details circle NED-323 A4 on enclosed inquiry slip ▲

POWER STRAIGHTENER for material up to 6-in. wide

Variable speed drive unit which replaces the single speed motor in improved model RS-67 power driven straightener makes it easier to control output speed to conform to job requirements. Machine can handle material up to 6 in. wide and ⅛-in. thick, maximum in cold rolled steel. It has two power-driven take-in rolls, seven plain straightening rolls, two power-driven take-out rolls, 5 to 1 ratio variable speed drive, output of 10 to 50 fpm, mercury switch loop control and ½-hp motor. Same type of unit is also made in 10 and 12-in. capacity. Made by **U. S. Tool Co.**, Dept. N, East Orange, N. J.

▲ For more details circle NED-324 A4 on enclosed inquiry slip ▲

ELECTROPLATING TANK is improved barrel-type unit



Improved Mercil-type tank for barrel electroplating is designed to save space, reduce maintenance cost and simplify barrel positioning. It can be used for all plating work except chrome. Flanges are turned in, saving space and providing an enclosure for hanging heating or cooling coils. Motor drive is compact, and shaft is located above solution level, making leakage through shaft openings in tank wall impossible. Overflow trough has been eliminated, saving space inside the tank. Unit is available with ID measurements of either 14 x 30 or 14 x 36 in. It can be lined with either vulcanized rubber or plasticized PVC, or it can be provided with rough wire glass behind anodes for cyanide solutions. Made by **Hanson-Van Winkle-Munning Co.**, W. Church St., Matawan, N. J.

▲ For more details circle NED-325 A4 on enclosed inquiry slip ▲

DO YOU KNOW? Giant glass-lined tanks holding more than 30,000 gallons and weighing in excess of 150 tons when full are held securely even through shocks of earthquake force by a new brewery tank support. Support provides for tank expansion or "breathing" during filling or emptying operations. Need for overhead structures is eliminated, and design is adaptable to modern one-story buildings. Developed by Pfaudler Co., Dept. NED, Rochester 3, N. Y.

▲ For more details circle NED-326 A4 on enclosed inquiry slip ▲

NOW! Built-In Protection Against Reversing!

LINE-O-POWER WITH NEW BACKSTOP!

Newly designed, the Foote Bros. Backstop* is one more reason why Line-O-Power Drives are your best answer for tough jobs. The Backstop *positively* protects equipment against reverse rotation — Duti-Rated Lifetime Gears *positively* assure maximum power in minimum space.

**Optional for all standard straight line Line-O-Powers.*

BACKSTOP FEATURES
- Compact, Automatic, Wear-free
- Select without Service Factors
- Easily Changed for New Rotation

This Trademark Stands for the Finest in Industrial Gearing

WRITE DEPT. NE FOR DETAILS
FOOTE BROS. Gear and Machine Corporation
4545 South Western Boulevard
Chicago 9, Illinois

▲ For more details circle NED-327 A4 on enclosed inquiry slip ▲

new TOLEDO PIPE WRENCH

Unconditionally Guaranteed

Heavy Duty

Here's the wrench for rugged duty—and hard tough work—backed by our *unconditional guarantee!* This means you are fully protected against expense if the wrench housing or hook breaks or distorts—we will replace it Free.

You'll like the easy-action nut and single spring that assure quicker easier setting of jaws . . . improved handle design that increases strength and provides better hand-grip. Built for easy handling . . . long life! Complete range of sizes—6" to 48". Write for new catalog. Order through your supply house. The Toledo Pipe Threading Machine Co., Toledo, Ohio. New York Office: 165 Broadway, Room 1310.

Rely on the Leader . . . all the way! **TOLEDO**

PIPE TOOLS • POWER PIPE MACHINES • POWER DRIVES

▲ For more details circle NED-328 A4 on enclosed inquiry slip ▲

TOOL MANUFACTURERS, TOO, NEED TORNADO.

Take the case of Circle Tool and Mfg. Co., Chicago, . . . alert management recognized that constantly accumulating dust, dirt and chips were cutting into production time and efficiency . . . thus affecting quality and company profits.

They investigated! —and bought Tornado, the powerful vacuum cleaner with air velocities above 300 m.p.h. Now they clean walls, ceilings, floors or machines in a jiffy-pick up solids or liquids without any conversion. And, incidentally, quality as well as profits are on the upswing.

"ON-THE-SPOT" DUST PROTECTION

A Tornado dust collector quickly sucks up all dust from this grinder during operation.

Let the Tornado man turn your dust and dirt into profits . . . He'll gladly demonstrate right in your plant, at no obligation to you.

WRITE FOR TORNADO BULLETIN 600 TODAY!

BREUER ELECTRIC MFG. CO.

5116 North Ravenswood Avenue • Chicago 40, Illinois

▲ For more details circle NED-329 A4 on enclosed inquiry slip ▲

Won't Smudge!

LABELON PLASTIC

RESISTS: DIRT GREASE WATER ACIDS

Write on it

TAPE

STICKS WITHOUT MOISTENING

LABELON TAPE sticks without moistening to any smooth, dry surface—yet strips off cleanly. Write or print on it with pencil, stylus or typewriter. Message WON'T SMUDGE . . . defies dirt, grease, water, acids . . . stays clean, easy-to-read—because writing surface is protected by transparent plastic! Available in rolls—or in flat form on backing sheets for typewriter use.

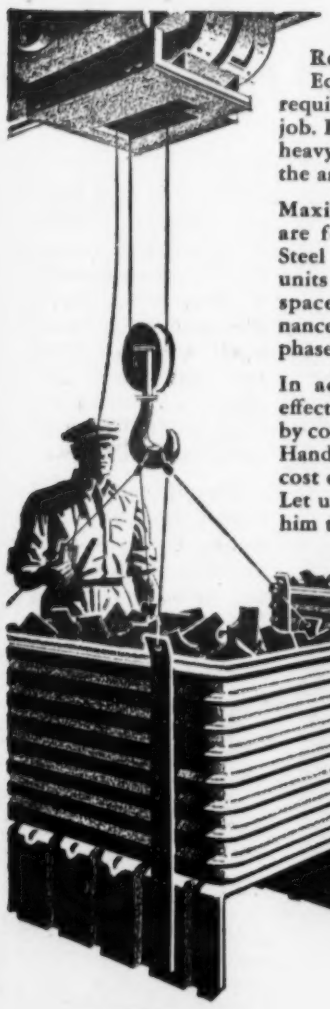
Use Labelon "Write on it" Tape to label stockroom shelves, bins, tools, hard-to-mark parts; for indicating rejects and service department repairs; for marking laboratory equipment, supplies, experiments; for panel boards or wiring; for office files, folders, etc.

For samples and prices, see your nearest dealer or write Dept. NED-1.

LABELON TAPE CO., INC.
450 Atlantic Ave., Rochester 9, N. Y.

▲ For more details circle NED-330 A4 on enclosed inquiry slip ▲

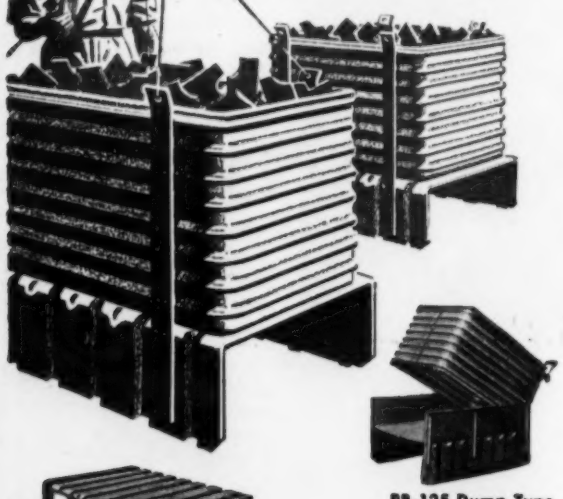
BUILT FOR THE MOST RUGGED HANDLING JOBS



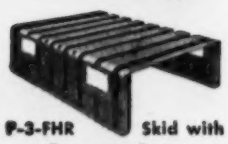
Republic Materials Handling Equipment is built to meet the requirements of each individual job. For handling your extremely heavy or light loads, Republic has the answer.

Maximum strength and rigidity are featured in every Republic Steel Box, Skid and Pallet. These units speed production, save floor space, require minimum maintenance and produce savings in all phases of materials handling.

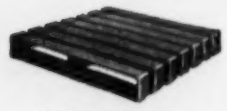
In addition, many plants have effected savings in handling costs by consulting a Republic Materials Handling Engineer. There is no cost or obligation for this service. Let us know when you would like him to visit your plant.



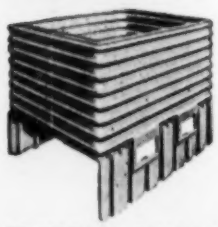
PB-125 Dump Type Box and Skid Unit



P-3-FHR Skid with Four-way Entry



P-14 Double-face Steel Pallet



PB-650 Box and Skid Unit with Sliding End Door

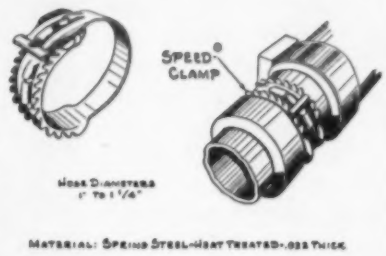
PRESSED STEEL DIVISION
REPUBLIC STEEL CORPORATION
6206 TRUSCON AVENUE • CLEVELAND 27, OHIO
Export Department: Chrysler Building, New York 17, New York

Republic REPUBLIC STEEL
MATERIALS HANDLING EQUIPMENT

▲ For more details circle NED-331 A4 on enclosed inquiry slip ▲

HOSE CLAMP
ratchet type, 1 to 1¼-in. capacity

Designed originally to secure hoses to oxygen masks, Speed Clamp has a ratchet-tooth mechanism permitting it to accommodate three hose diameters between 1 and 1¼ in. It is fabricated from spring steel, can be reused indefinitely and is suitable for many other hose securing applications. It snaps into prelatched position by hand and can then be locked securely from any angle with standard pliers. Made by **Tinnerman Products, Inc.,** Dept. 14, P. O. Box 6688, Cleveland 1, O.



▲ For more details circle NED-332 A4 on enclosed inquiry slip ▲

BASKET TRUCKS
elevated type holds 4 bushels

Wide variety of products can be handled in this Dandux 4-bushel capacity elevated basket truck. Equipped with rubber swivel casters, it has a spring steel frame and leather-reinforced canvas basket. Inside of the basket offers no resistance, sharp edges or protrusions that could snag, tear or break packages, cloth or other materials. Unit is also available without casters for stationary use. Made by **C. R. Daniels, Inc.,** Dept. N, Daniels, Md.

▲ For more details circle NED-333 A4 on enclosed inquiry slip ▲

MACHINE STANDS
units custom-made to specifications

Illustrated machine stand is typical of custom - made units now available. It can be equipped with ball bearing casters if desired, and all curves and angles are made to blueprints. Top and bottom are reinforced by steel gussets, and general construction is of ⅛-in. formed and welded sheet steel. Unit illustrated is equipped with two drawers. Made by **Industrial Bench & Equipment Mfg. Co.,** 98 South St., New Britain, Conn.

▲ For more details circle NED-334 A4 on enclosed inquiry slip ▲

This Becker Spray Gun paid for itself many times in rust-proofing machined castings.

BECKER CO_2 POWERED SPRAY GUN . . .

NO COMPRESSOR • NO HOSES
NO ELECTRICAL OUTLETS NEEDED

USE IT ANYWHERE!

Only $19.95 with 10 cartridges

It's such a handy, *portable* production tool that literally hundreds of industrial spraying jobs are possible with the new Becker "Model 50" Spray Gun. It's the most versatile unit yet devised for spraying paints, oils, solvents, protective coatings, etc. Powerful CO_2 cartridge sprays up to one 21-ounce containerful; or tank can be charged from air hose (for liquids atomizing at 120 psi) with special attachment. Nozzle adjusts from spray to stream . . . removes without pressure loss. Ruggedly built with precision-machined brass and stainless inserts; heavy gauge steel container and cast aluminum head.

SEE YOUR DISTRIBUTOR or order direct, postpaid. Extra CO_2 cartridges at your dealer's, or 10 for $1, postpaid . . . also cartridges in case lots. Write for further details.

SULLIVAN-BECKER CO., Dept 174A, Kenosha, Wis.

▲ For more details circle NED-335 A4 on enclosed inquiry slip ▲

KNEE SAFETY!

..IN YOUR PLANT

JUDSEN KNEE PADS

for every down-on-the-knees job!

Alert Safety Directors and Plant Executives throughout the country have been quick to recognize the benefits offered by JUDSEN "*Cushion Soft*" KNEE PADS:

- Increased Work Efficiency!
- Less Fatigue! Less Time-Out!
- Protection Against Injuries!

Neat, durable, compact JUDSEN KNEE PADS are as easy to wear as gloves . . . *kneeling* . . . *standing* . . . *walking*. Find out about this AID TO PRODUCTION EFFICIENCY today. ASK YOUR SUPPLIER OR WRITE.

JUDSEN RUBBER WORKS, INC.
4107 WEST KINZIE STREET, CHICAGO 24
Manufacturers MOLDED • EXTRUDED • SPONGE Since 1901

▲ For more details circle NED-336 A4 on enclosed inquiry slip ▲

Hydromatic LIFT TRUCKS

STUEBING DESIGNED • STUEBING ENGINEERED • STUEBING BUILT

multi stroke
safety
and
economy
ease of
operation
speed

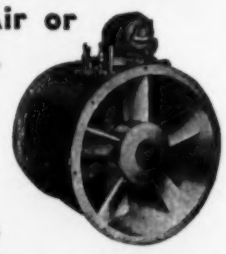
Built like a fine machine tool, the multi-stroke Hydromatic features easy lift, easy rolling, quick automatic action. Unusually economical and trouble-free in operation. Machine-bolted frame and machined standardized parts speed and simplify occasional repairs, eliminate downtime.

LIFT TRUCKS INCORPORATED
2423-2431 Spring Grove Avenue • Cincinnati 14, Ohio

▲ For more details circle NED-337 A4 on enclosed inquiry slip ▲

The Wingfoil Straight-Line Duct Fan is Unexcelled

For supplying Fresh Air or Exhausting Air containing Paint Spray, Dirt, Steam, Explosive Vapors, etc., in Any Volume or Pressure



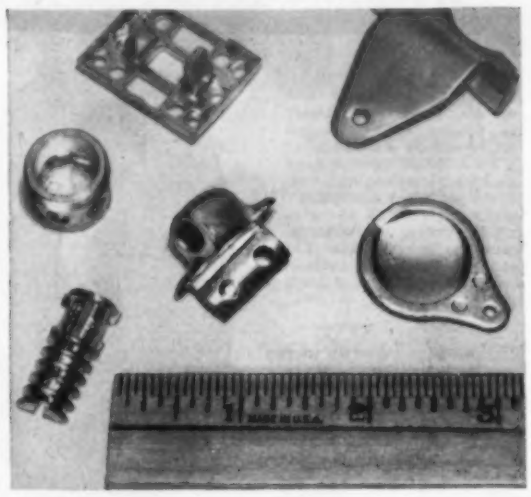
It may be used as a roof intake or exhaust, or it may be inserted in a run of duct, occupying no extra space. The motor is located outside the casing, driving the Wingfoil "non-overloading" fan by means of an enclosed V-belt. It is light, compact and easily handled, and may be mounted either horizontally or vertically.

Write for Bulletin F-10

L. J. Wing Mfg. Co. 165 Vreeland Mills Road Linden, New Jersey

▲ For more details circle NED-338 A4 on enclosed inquiry slip ▲

TINY DIE-CASTINGS
cut small parts cost

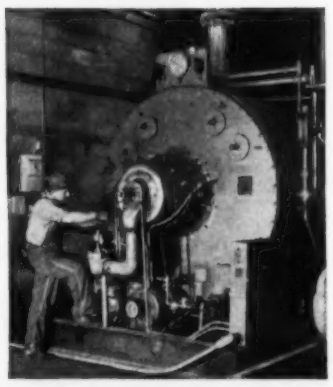


Small zinc die-castings—1000 per lb. to 3 per lb.—made at high speed on special automatic machines. Method combines design latitude of die-casting with the speed of fully-automatic processes. Possibilities to users: cut piece costs . . . consolidate two or more parts into one . . . reduce machining operations. *Small Parts Folder and Samples* on request.

DOLLIN CORPORATION
612 So. 21st St., Irvington 11, N. J.

For more details circle **NED-339 A4** on enclosed inquiry slip

9 REASONS WHY STEAM COSTS GO DOWN
where *Powermasters* go in ....



COST-SAVING INSTALLATION—
complete factory assembled and fire-tested units delivered ready for operation as soon as connected to service lines; no foundation or costly stack needed.

FULLY AUTOMATIC CONTROL
provides maximum operating dependability and safety protection with minimum attention of operator.

3-PASS BOILER
produces most efficient flue gas velocity and heat transfer with maximum maintenance convenience.

INFINITELY VARIABLE COMBUSTION MODULATION
maintains most efficient firing at all loads. Instant response to load swings from 20 to 100% saves fuel, assures constant steam pressure and temperature.

STAGGERED TUBES
assure quicker heating, faster steaming and high quality dry steam; prolong tube life.

FORCED DRAFT
gives most accurate control of combustion and supply; saves equipment and maintenance costs.

83% GUARANTEED MINIMUM EFFICIENCY
saves fuel. At less than full load, Powermaster efficiency actually increases!

MAINTENANCE-SAVING ACCESSIBILITY
to water and fire sides simplifies tube cleaning and inspection.

VORIFLOW COMBUSTION
with air-atomizing oil burner or pre-mix gas burner keeps fuel costs down and boiler efficiency high at all loads. Combination burner allows quick change of fuel.

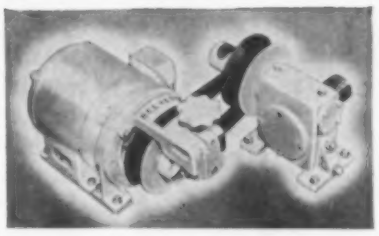
SEND FOR NEW BULLETIN 1219
Describes and illustrates all cost-saving features of Powermaster Packaged Automatic Boilers in sizes to 500 h.p. and pressures to 250 psi.

ORR & SEMBOWER, INC.
930 Morgantown Road, Reading, Penna.

BUILDERS OF COST-SAVING BOILERS SINCE 1885

For more details circle **NED-340 A4** on enclosed inquiry slip

VARIABLE SPEED UNIT
for low speed applications



A new variable speed disk assembly makes possible use of Flexi-Speed variable speed unit for driving at recommended speeds to gear reducers of either worm or helical type. It can be mounted in almost any position around the driven equipment, driving in any direction and delivering any desired speed within a ratio of 6:1. Six different belt lengths offer a wide choice of center distances. Unit is available in ½, ¾ and 1-hp capacities. Made by **Reeves Pulley Co.**, 1225 Seventh St., Columbus, Ind.

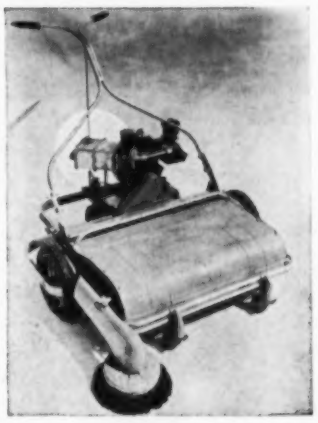
For more details circle **NED-341 A4** on enclosed inquiry slip

SMALL PARTS CABINETS
with 16 and 32 drawers

Aluminum drawers of both the 16 and 32-drawer all-metal cabinets can be used for nails, screws, bolts, washers and other small items. Drawers can be divided into three compartments if desired with furnished dividers. Smaller unit measures 6 x 12¾ x 7¾ in., while larger unit is 15¼ in. high. Drawers are 1¼ x 2¾ x 5⅞ in. Space is provided for labeling drawers. Made by **Perkins Products Inc.**, 170 E. Market St., Alliance, O.

For more details circle **NED-342 A4** on enclosed inquiry slip

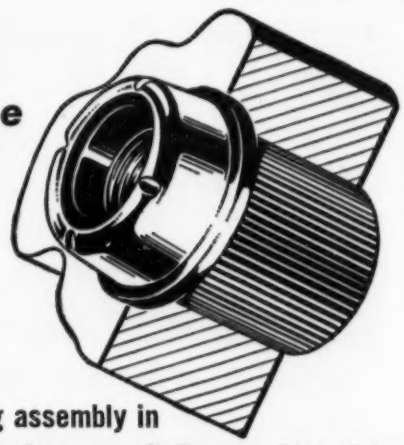
INDUSTRIAL SWEEPER
exhaust purified for inside use



Gasoline-powered industrial sweeper is available with Oxy-Catalyst catalytic exhaust purifier for use inside buildings and other confined work areas. The attachment reduces carbon monoxide in the exhaust gases to a ratio of 0:0 at both idling and governed speeds. It is seen in illustration as a box-like attachment located where the muffler would ordinarily be found. Made by **Parker Sweeper Co.**, 6 Bechtle Ave., Springfield, O.

For more details circle **NED-343 A4** on enclosed inquiry slip

spline-type ELASTIC STOP nuts



for self-broaching assembly in Aluminum, Magnesium or soft Ferrous Materials

- Driven into pre-formed or drilled holes, spline nuts broach a tight grip into the casting.
- Thread-tapping problems are avoided; the nut becomes a threaded steel insert as well as a fastener.
- Spline nuts remain permanently in place . . . save production and assembly time.
- **WRITE FOR** design information on self-locking, vibration-proof Spline Nuts and other standard ESNA fasteners. Address Dept. N37-137.

ELASTIC STOP NUT CORPORATION OF AMERICA
2330 Vauxhall Road, Union, N. J.

DESIGN HEADQUARTERS FOR SELF-LOCKING FASTENERS

For more details circle **NED-344 A4** on enclosed inquiry slip

NEW! Ball Bearing Equipped BARCO SWING JOINTS

for Loading and Unloading Lines

BARCO'S new, attractively priced, all-steel ball bearing *Swing Joints* are specifically designed to provide for movement and flexibility in metal pipe loading and unloading lines handling gasoline, oil, alcohol, chemicals, and other fluids.

11 DIFFERENT STYLES—Barco offers single swing, double swing, and counterbalance styles to meet every need. Sizes 2", 2½", 3", 4".

SUPERIOR DESIGN—The ball bearings will not fall out when joints are taken apart. Long bearing provides adequate pipe support. Special O-ring seal insures leakproof service over wide temperature range, −40°F to +225°F.

INFORMATION—Send for latest Catalog No. 400 and engineering information. BARCO MANUFACTURING CO., 530B Hough St., Barrington, Illinois. A Chicago Suburb

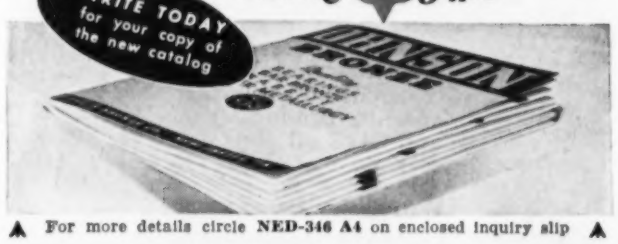
For more details circle **NED-345 A4** on enclosed inquiry slip

This Catalog WILL SAVE YOU MONEY SAVE YOU TIME

You may be surprised how many times you will find the right size sleeve bearing or bronze bar in the Johnson Bearing Catalog. The answer is over 90% of the times you look! Keep a copy handy. Order from your local Johnson Distributor by size or by catalog number. He has these standard, stock size Johnson Sleeve Bearings right in stock . . . also Universal Bronze Bars and Babbitt Metal.

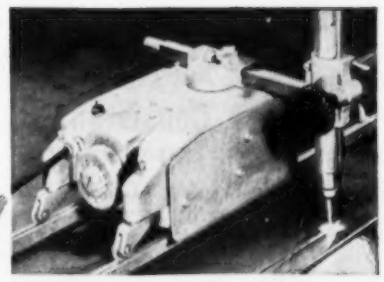
JOHNSON BRONZE COMPANY
580 South Mill St., New Castle, Pa.

JOHNSON BEARINGS *Sleeve-Type*



For more details circle **NED-346 A4** on enclosed inquiry slip

SAVE TIME AND MONEY with this OXWELD Trade-Mark MACHINE CARRIAGE



Here is a new lightweight machine carriage—the OXWELD CM-45—that will mechanize literally dozens of oxy-acetylene jobs in large or small metalworking shops, and do them better than the most skilled hands.

You save money when you let the CM-45 do your cutting, beveling, flame-treating, or special welding jobs. Its efficient operation saves oxygen and acetylene as well as time, and rejects are reduced to a minimum.

For further information, call your nearest LINDE representative today. Ask for a free copy of Form 7839. No obligation.

LINDE AIR PRODUCTS COMPANY
A Division of Union Carbide and Carbon Corporation
30 E. 42nd St., New York 17, N. Y. Offices in Other Principal Cities
In Canada: Dominion Oxygen Company, Limited, Toronto

"Oxweld" is a trade-mark of Union Carbide and Carbon Corporation.

For more details circle **NED-347 A4** on enclosed inquiry slip

Special cold headed products

. . . nails • rivets • screws . . . made to order

. . . and to your specifications in any metal. Large raw material inventory for your convenience. Send drawing—advise quantity. *Free catalog on request.*

JOHN HASSALL INC.

P.O. Box 2178, Westbury, N. Y.

For more details circle **NED-348 A4** on enclosed inquiry slip

Look To The Leader For Lubricating Devices

GITS

40 Years' Leadership

Yes, for 40 years GITS has been setting the standard for industry... solving tough lubricating problems...earning the confidence of manufacturers . . . it's the reason people say, "Call GITS first".

Low Cost

Yes, GITS oil cups can do a complete lubricating job for you . . . prolonging bearing life, reducing maintenance costs, cutting down-time, boosting production . . . and GITS oil cups cost so little.

World's Largest Selection

Yes, only GITS can offer you such a wide range of standard stock sizes. From *just one* source you can get *all* lubrication devices in *any design* for *any purpose.*

Consistent Top Quality

Yes, GITS is known for uniform quality in design, materials and machining . . . this means constant, dependable performance for you. Inferior products can cost you time and money. Demand the best . . . get GITS.

Write Today for FREE CATALOG No. 60A Use it as your handy reference for lubricating devices

Oil Hole Covers, Oil Cups, Grease Cups, Bottle Oilers, Gauges, Gravity-Feed, Wick-Feed, Constant Level, Vibrating Rod Styles. Threaded or Drive-Type, Elbow or Straight.

GITS BROS. MFG. CO.

1833 S. Kilbourn Ave. Chicago 23, Ill.

For more details circle **NED-349 A4** on enclosed inquiry slip

DISPLAY RACK
erects and knocks down easly

Easily dismantled small display rack is designed for use in sales offices, restricted convention spaces or hotel rooms. It measures 5 ft wide x 9¼ ft high and is erected rapidly from precut stock channel members and fittings which bolt together to support fiber board display background and literature shelf. Made by **Unistrut Products Co.,** Dept. 75, 1013 W. Washington Blvd., Chicago 7, Ill.

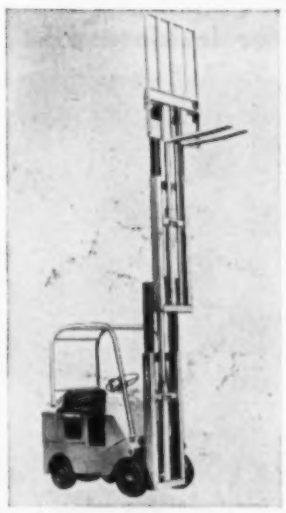
For more details circle **NED-350 A4** on enclosed inquiry slip

FOOT SWITCH
with two selective circuits

Only one of the two circuits incorporated in the Executive foot switch can be operated at one time. Low selective unit is comfortably operated from any heel height. Either switch, or both can be wired as normally-open or normally-closed, single pole-double throw. Made by **Linemaster Switch Corp.,** 428 Woodstock Terrace, Woodstock, Conn.

For more details circle **NED-351 A4** on enclosed inquiry slip

DOUBLE TELESCOPIC MAST
for use on Towmotor lift trucks



Double Telescopic mast, developed for use on Towmotor lift trucks, can be lowered for working in areas with low ceilings and in boxcars or highway trailers, or extended for high stacking in other areas. Unit consists of two short masts which can be operated independently or simultaneously. Six sizes are available with total lift heights from 144 to 216 in. and minimum heights from 65 to 83 in. Mast is offered for Towmotor models 390, 420, 460 and 480-P. Made by **Towmotor Corp.,** 1219 E. 152nd St., Cleveland 10, O.

For more details circle **NED-352 A4** on enclosed inquiry slip

SAVE 2 WAYS on Chain Drives and Conveyors

This Book Shows You How

With Baldwin-Rex Double Pitch Roller Chain, you save both cost and weight without sacrificing the high quality of standard roller chain. Where speeds are slow to medium, loads are moderate and centers are long, Double-Pitch is often the economical choice.

For all the details on how this precision chain can save you important money and weight, just use the coupon to send for our free Double-Pitch Bulletin.

BALDWIN-REX ROLLER CHAINS

Chain Belt Company 53-409
364 Plainfield St., Springfield 2, Mass.

Please send me Bulletin 51-2.

Name.....

Company.....*Dept*.....

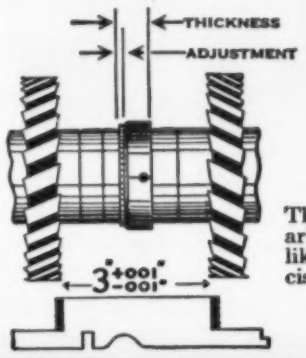
Address.....

City.....*State*.....

For more details circle **NED-353 A4** on enclosed inquiry slip

SAVE TIME on GANG MILLING SET-UPS

Dayton Rogers *hardened and ground,* adjustable micrometer spacing collars are considered the last word on all types of milling machine set-ups for gang milling, straddle milling and similar operations. They are quickly and easily adjusted to the plus or minus positive adjustment. The collar is so designed that it gives the minimum over-all thickness with the maximum adjustment, graduated in .001"



They are stocked for cutter arbors from ⅝" to 2". You'll like the speed, the precision, and the time saved!

Write Today For More Information!

DAYTON ROGERS *Manufacturing Company*

2829 13th AVE. S. MINNEAPOLIS, MINNESOTA

For more details circle **NED-354 A4** on enclosed inquiry slip

NEW MEAD INDUSTRIAL AIR POWER CATALOG Ready!

Full of Suggestions for **FASTER, CHEAPER PRODUCTION!**

Illustrates, describes Air Cylinders, Valves, air operated Presses, Vises, Chucks, Hammers, Drill Press Feeds, Work Feeders, Timers, semi-automatic combinations, etc.

**PNEUMATIC CYLINDERS*

Write for Complete Catalog!

MEAD SPECIALTIES COMPANY

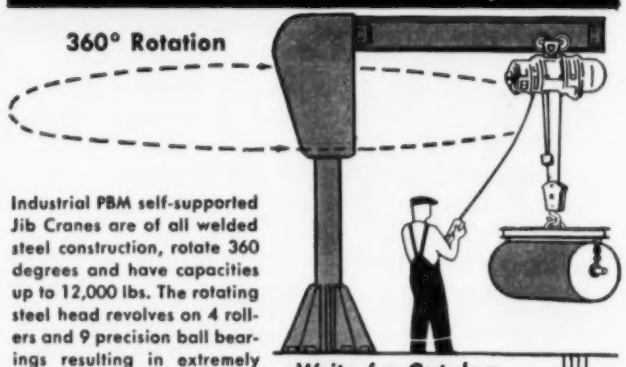
4114 NO. KNOX AVE., DEPT. NA-14 CHICAGO 41, ILL.

For more details circle **NED-355 A4** on enclosed inquiry slip

Industrial HEAVY DUTY JIB CRANES

Precision engineered and built for smooth efficient operation

360° Rotation



Industrial PBM self-supported Jib Cranes are of all welded steel construction, rotate 360 degrees and have capacities up to 12,000 lbs. The rotating steel head revolves on 4 rollers and 9 precision ball bearings resulting in extremely smooth operation — unsurpassed by any other crane of its type. The high standard of workmanship and material, coupled with reliable performance make Industrial Jib Cranes your best buy.

Industrial manufactures 6 other types of Jibs and many models of Overhead Traveling Cranes to cover every need. Consult with Industrial for cranes to solve your material handling problems.

Write for Catalog

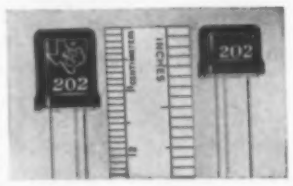
Industrial CRANES

INDUSTRIAL CRANE & HOIST CORPORATION
(formerly Industrial Equipment Co.)
327 NORTH ADA STREET · CHICAGO 7, ILLINOIS
Overhead Cranes • Jib Cranes • Monorail Systems • Crane Runways
Representatives in Principal Cities

For more details circle **NED-356 A4** on enclosed inquiry slip

▲ For more details circle **NED-357 A4** on enclosed inquiry slip ▲

SMALLER TRANSISTORS
reduced 40 per cent in size



These transistors have been decreased in size by 40 per cent. Overall length of case is now 0.3-in. as opposed to former 0.5-in. This reduction has been affected without altering fabrication methods or properties of units, which feature glass-to-metal hermetic seal and electrically insulating finish. Three types are available differing principally in collector resistance and amplification factor, which is rated at minimum of 0.90, 0.95 and 0.98. Made by **Texas Instruments, Inc.**, 6001 Lemmon Ave., Dallas 9, Tex.

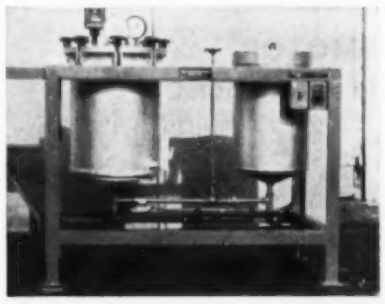
▲ For more details circle **NED-360 A4** on enclosed inquiry slip ▲

AUTOMATIC CONTROL VALVES
for liquid and vapor services

Only one moving part is incorporated in line of high capacity automatic control valves primarily designed for safety and relief applications, but suited to almost all liquid and vapor control services. Latter uses require only changing the external actuating equipment. Valves have angle body design and are available in 2, 3, 4 and 6-in. sizes for pressures ranging from 0.187 to 150 psi. They can be opened and closed manually and automatically either at the valve or pneumatically, hydraulically or electrically from a remote location. Made by **Controlled Flow Valve Co.**, 805-N Baltimore Ave., Kansas City, Mo.

▲ For more details circle **NED-361 A4** on enclosed inquiry slip ▲

VACUUM IMPREGNATION UNIT
operates at up to 300° F



A vacuum-pressure vessel and a impregnant reservoir are combined in one frame to make up this versatile vacuum impregnation unit. Equipment finds practical application in impregnating rotors, stators, motor windings, condensers and other electrical gear made to specifications. Electrically heated vapors are circulated within jacket of impregnating tank, heating it evenly and eliminating local hot spots. Tank can operate at temperatures up to 300° F. Built-in vacuum system evacuates tank and heat aids in removing moisture from objects to be impregnated before impregnant is admitted to tank. Up to 100 psi can then be used to force material more deeply into objects. Made by **High Vacuum Equipment Corp.**, 347 Lincoln St., Hingham, Mass.

▲ For more details circle **NED-362 A4** on enclosed inquiry slip ▲

▲ For more details circle **NED-358 A4** on enclosed inquiry slip ▲

Streamlined construction of the new T-J Cylinders *eliminates tie rods . . . reduces head size . . .* and *saves up to 40% in mounting space!* In addition, a new high in strength is achieved with solid steel heads and heavy wall seamless steel body . . . leakproof construction . . . extra high safety factor. Cylinder walls are precision honed and hard chrome plated for long-life efficiency. Available with new T-J Super Cushion Flexible Seals. Many standard sizes and styles . . . cushioned and non-cushioned . . . for pushing, pulling, lifting, clamping or control jobs. Write for bulletin 8152. The Tomkins-Johnson Co., Jackson, Michigan.

4 Weeks Delivery on the Spacemaker — any style any stroke, 1" to 3" diam.

37 YEARS EXPERIENCE T-J TOMKINS-JOHNSON

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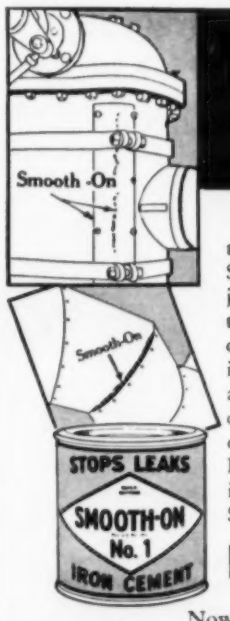

Repairs both Cast and Sheet Metal

The quick-hardening, fast-clinging, temperature-resistant properties of Smooth-On No. 1 Iron Cement make it just right for countless repairs in industrial plants, shops, homes. It seals cracked castings, stops leaks in breeching, tightens loose rivets, bolts, screws and machine parts. Does not require use of heat or "gadgets". Any handy man can use it successfully. Buy Smooth-On No. 1 in 1- 5- or 20-lb size and keep it handy. If your supply house hasn't Smooth-On, write us.

FREE Famous Repair Handbook

Now in its 28th edition, this 40-page, fully illustrated, pocket-size manual shows many short-cut, time-saving, money-saving repairs to machinery, equipment, pipe lines, etc. Drop us a line for YOUR free copy.
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570 Communipaw Ave., Jersey City 4, N. J.
SO-292

Do it with **SMOOTH-ON**
THE IRON REPAIR CEMENT OF MANY USES

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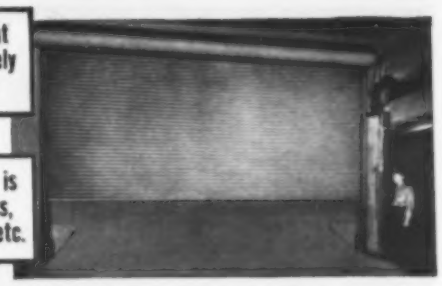

Door rises straight upward—completely out of the way.

All ceiling space is clear—for hoists, conveyors, ducts, etc.

Steel jambs anchor curtain against wind or storm damage!

Rugged, all-metal resistance to fire, storm or intrusion.

All floor and wall space around door always fully usable.

Clears the entire opening, stays out of reach of damage.

Kinnear Steel Rolling Doors

Originated by Kinnear, the door with the interlocking steel slat curtain has set the pace in long-lasting, low-maintenance efficiency and all-metal protection. Coiling into small space just above the doorway, it opens *completely* out of the way, clears the *entire* opening, and permits use of all surrounding floor and wall space at all times. Built any size; motor or manual operation. Write for the new Kinnear catalog.

The KINNEAR Mfg. Co.
Factories:
3017 Fields Avenue, Columbus 16, Ohio, 1742 Yosemite Avenue, San Francisco 24, Calif.
Offices & Agents in Principal Cities

KINNEAR ROLLING DOORS
Saving Ways in Doorways

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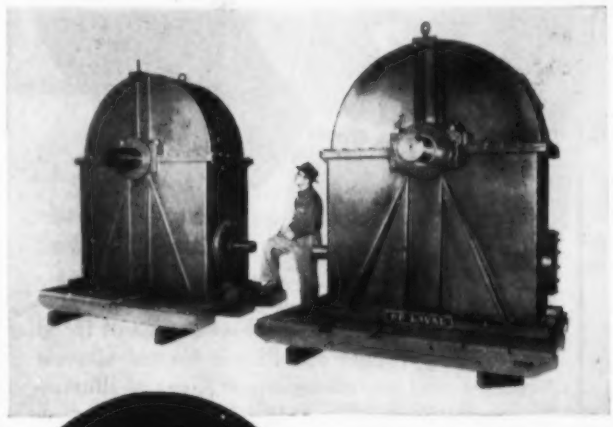
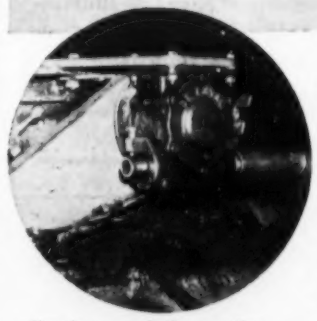
DE LAVAL
SPEED REDUCERS

from dwarf to giant size





Here's one of the smaller De Laval worm gear speed reducers with a 3" center distance being used for a new coal drilling machine.

Pair of giant 36-inch center distance speed reducers designed and built by De Laval for slab transfers in a slabbing-blooming mill. These slab transfers are used to convey steel slabs up to 12 in. thick and 42 in. wide, weighing over 55,000 lb. The De Laval worm gear units, with a reduction ratio of 26⅔ to 1 in a single set of gearing, are each driven by a 200 hp, 410 rpm motor coupled directly to the input shafts of the slab transfers.

De Laval heavy-duty worm gear speed reducers seldom require attention under the most rugged operating conditions. They make a quiet, close-couple compact drive. They permit high ratio reductions in a minimum of space and withstand severe shock loads without damage. De Laval builds all sizes from 3" to 36" center distances for transmission ratios of 3.1:1 to 100:1 in single reduction units and ratios of 50:1 to 8000:1 in double reduction units. Whether you need dwarf or giant worm gearing, consult De Laval for engineering assistance. *Send for De Laval Manuals G-WBV and G-WWH containing data on single and double reduction units.*

DE LAVAL *Speed Reducers*
DE LAVAL STEAM TURBINE COMPANY
808 Nottingham Way, Trenton 2, New Jersey
DL 810A

▲ For more details circle **NED-365 A4** on enclosed inquiry slip ▲

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A DEPENDABLE SOURCE FOR READY TO USE BRONZE BUSHINGS

OVER 800 STOCK SIZES

PRECISION MACHINED IN THE SIZE YOU NEED

BRONZE BAR STOCK
BRONZE BUSHINGS
PILLOW BLOCKS
SHEET LUBRICATOR
Randall
GRAPHITED BEARINGS
THRUST WASHERS
SAFETY COLLARS
BRONZE CASTING

RANDALL GRAPHITE BEARINGS, INC.
1007 S. Greenlawn Ave., Lima, Ohio.

For more details circle NED-366 A4 on enclosed inquiry slip

FREE Send for your copy today

NOW ··· You can choose the RIGHT Industrial Work Glove for EACH Job . . .

The SIGN of VALUE
HOOD
Industrial Work Gloves
KEEP WORKING HANDS SAFER

by using the handy Hood Performance Chart

Chart shows comparative wear and chemical resistance of Hood Neoprene, Rubber and Plastic Coated Gloves; catalog contains eleven more pages of illustrations and description of Hood Industrial Gloves; the choice for *every* job in *any* industry.

HOOD RUBBER CO.
Watertown, Mass.

For more details circle NED-367 A4 on enclosed inquiry slip

THE FASTEST, EASIEST WAY TO ADDRESS YOUR CONTAINERS

Pictured here is the WEBER DIRECT-TO-CONTAINER SYSTEM. The cartons have been pre-printed with a label frame. Consignee's address is printed inside the frames with a WEBER RJ-1 hand printer at the rate of 40 to 50 cartons per minute. Eliminates labels. Faster, neater than brush stenciling. The RJ-1 prints from stencil easily prepared on typewriter. Reservoir holds enough ink for 7,500 to 10,000 prints. Can be supplied with one or two counters for quantity check.

MODEL RJ-1 $14.50 WITH SUPPLIES.

SEND FOR FOLDER ON THE RJ-1 HAND PRINTER AND DIRECT-TO-CONTAINER SYSTEM

Weber Label and Marking Systems,
Div.—Weber Addressing Machine Co., Dept. NE-6 Mt. Prospect, Ill.

another Weber system

For more details circle NED-368 A4 on enclosed inquiry slip

THIMBLE-SIZE TRANSISTOR has 20-kw power output

Thimble-size power-type transistor has an output of 20 w, sufficient to operate motors, valves and relays. It is being built at present on a pilot line basis for a prototype electronic aircraft fuel gage, but is applicable to many automatic control systems. High output results from discovery of an effective means of removing heat from the germanium-alloy junction. Made by **Minneapolis-Honeywell Regulator Co.**, 2950 Fourth Ave. S., Minneapolis, Minn.

For more details circle NED-369 A4 on enclosed inquiry slip

SNOW REMOVER 2-hp unit clears 24-in. deep snow

Capable of quickly cutting a path in snow 24-in. deep, Sno-Mover is powered by a 2-hp gasoline motor and has an adjustable chute for throwing snow either to left or right. Unit is lightweight and easy to handle and rolls on four wheels. Front wheel units are adjustable for clearing rough driveways or smooth walks. Made by **Pioneer Gen-E-Motor Corp.**, 5850 W. Dickens Ave., Chicago 39, Ill.

For more details circle NED-370 A4 on enclosed inquiry slip

FLOATING GEARMOTOR for roll table operations

Floating type gearmotor for roll table operations has driving shaft equipped with a sleeve section which permits direct mounting on the roll shaft extension. It is provided with a torque rod to anchor the drive and prevent its turning, so that the whole drive "rides" with the roll. Torque rod is spring loaded to protect against reversal shock loads. Space is saved both by this mounting and by turning motor vertically downwards. Made by **Westinghouse Electric Corp.**, Dept. TP-513, 200 McCandless Ave., Pittsburgh 1, Pa.

For more details circle NED-371 A4 on enclosed inquiry slip

ELECTROLINE CHOKER SLING FITTING ADJUSTS AUTOMATICALLY TO ANY ANGLE OF PULL

For prolonging wire rope life, ease of attachment and complete safety, this revolutionary Electroline Choker Sling Fitting tops them all. Here's why:

- pivoted members adjust automatically to any load —they take the bend, instead of the rope.
- can't disengage under tension, or shock, the fitting always engages the rope.
- easy to apply—goes on in seconds, saves time.
- the Electroline Choker Sling Fitting outlives the rope it protects, reuse it over and over again.

A time and labor saver—in mills, factories, docks, material yards, warehouses: Wherever wire rope choker slings are used.

Send for bulletin "King of Sling Fittings"—which tells all.

Electroline Company
4121 South La Salle Street
CHICAGO 9, ILLINOIS
In Canada: Powerlite Devices, Ltd., Toronto

For more details circle NED-372 A4 on enclosed inquiry slip

NEW WILLSON Interchangeable Respirator

First truly interchangeable respirator. Requires no additional parts or accessories to use any one of the cartridges, filters, or combinations shown.

These Respirators are individually packed in sealed, transparent plastic bags enclosed in a sturdy metal-edge box.

Write for the new bulletin fully describing these new Willson Respirators. Standardization on the new Willson No. 800 Interchangeable Respirator can greatly simplify your respiratory protective inventory.

More than 300 safety products carry this famous trademark
WILLSON
Established 1870

WILLSON PRODUCTS, INC., 219 Washington Street, Reading, Pa.

For more details circle NED-373 A4 on enclosed inquiry slip

read what users say about CMD anti-scoring lubricant

CMD

Among technical men all over the country, CMD has become the standard for extreme pressure, anti-scoring lubrication. These men have found that they can get more efficient lubrication for a longer time . . . . . and get longer life out of their equipment too. People who have used and tested CMD are your best proof of its reliability.

"We have been using your Anti-Scoring Center Point Lubricant on all ejector, return and guide pins: and we highly recommend this lubricant to anyone having trouble with scored and broken pins of this type on die cast dies." *Die Manufacturer*

"We have tried out your CMD Anti-Scoring lubricants in both grease and oil in comparison with another brand claiming to be the world's best, for the purpose. We are happy to report that we have found your product superior in remaining in its protective position under sustained heavy loads for the longest periods of time of any material we have tried for this purpose." *Engineering Consultant*

"Some time ago you very kindly sent to us some samples of your CMD Center Point Lubricants. These have been carefully tested in a number of applications besides the lubricating of centers, and we are pleased to say that the results have been very satisfactory even in cases where other well known high pressure lubricants have failed in a very short time." *University Dept. of Physics*

Sample Kit Available for Your Trial

CHICAGO MANUFACTURING & DISTRIBUTING CO.
1902 West 46th Street, Chicago 9, Illinois

For more details circle NED-374 A4 on enclosed inquiry slip

keep HANDS and FINGERS away from PRESS RAM

LITTELL Air Blast Valves
Eject Automatically by Air . . . not by Hand

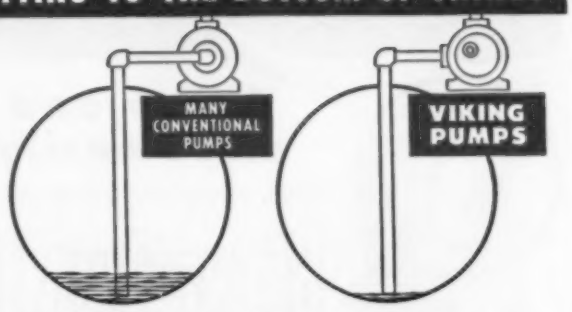
SAVE TIME . . . Faster production and lower labor costs
SAVE AIR . . . Reduce air consumption 92 percent
SAVE DIES . . . No damage to dies due to clogging
SAVE HANDS . . . Keep operators' hands and fingers out of danger zone
SAVE MONEY . . . Insurance premiums are lower when accidents are reduced.

QUICKLY INSTALLED—Littell Air Blast Valves can be installed on any make or size press in only a few minutes.

F. J. Littell MACHINE CO.
AIR DIVISION
4169 RAVENSWOOD AVE., CHICAGO 13, ILL.
— District Offices: Detroit and Cleveland —
Write for Catalog

For more details circle NED-375 A4 on enclosed inquiry slip

GETTING TO THE BOTTOM OF THINGS



The difference to you between profit and loss can depend upon the simple, positive action of Viking Rotary Pumps. Their fast, thorough stripping action can mean that you get all you pay for when emptying barrels, tanks and other containers instead of leaving a part of each load. Where many other pumps fail, efficient stripping is possible with Vikings because of the suction lift created by our famous Viking "gear-within-a-gear" pumping principle.

Whether the liquid you want to pump is thick or thin, you will pump more . . . faster with a Viking. What is your pumping problem? Send it along today and ask for bulletin 54SG.

VIKING AN HONORED NAME IN PUMPING

See Our Catalog in Sweets

VIKING PUMP COMPANY CEDAR FALLS, IOWA

For more details circle NED-376 A4 on enclosed inquiry slip

New! VARY-TALLY
Multiple-Unit Reset Counter

DESIGNED TO COUNT ANYTHING COUNTABLE

this new Vary-Tally can be supplied in any combination up to 6 banks high, 12 units wide, with the counting units arranged compactly on stands in tiers. Now check these special features of Veeder-Root design and construction:

- Easily Readable from any Angle . . . Bold Figures Always Centered in Window . . . No Glare . . . Figures not Covered by Fingers in Operation
- Easily Portable, yet Ruggedly Built for Long Wear
- Separate Counting Units Can be Rotated like Tires on a Car, to Distribute Wear Evenly
- All Parts Corrosion-Resistant
- Working Parts of Hardened Steel
- Operation Not Affected by Extreme Heat or Cold
- Individual Tag Above Each Counter-Window — Not Strip Tabs
- Veeder-Root Quality in Every Part

Now what's on *your* mind, that Vary-Tally can help you count? Write for news sheet and prices.

VEEDER-ROOT INC.

HARTFORD 2, CONNECTICUT

Chicago 6, Ill. • New York 19, N. Y. • Greenville, S. C.
Montreal 2, Canada • Dundee, Scotland
Offices and Agents in Principal Cities

"The Name that Counts"

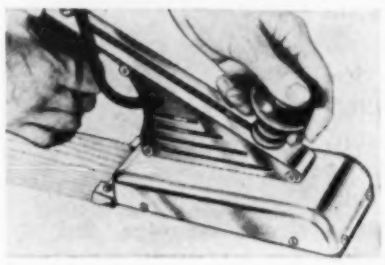
For more details circle NED-377 A4 on enclosed inquiry slip

POWER OPERATED VISES
available in 2½ through 6-in. sizes

Available for actuation by either foot or hand control, Wiltomatic power operated vises operate from plant airlines and are available in 2½ through 6-in. sizes. Conventional vise screw and handle are used to preset jaw opening to work piece size. Power stroke is adjustable from zero to ¾-in. Conversion kits are also available for manually operated Wilton vises now in use. Made by **Wilton Tool Mfg. Co.,** Dept. NED, 925 Wrightwood Ave., Chicago 14, Ill.

For more details circle NED-378 A4 on enclosed inquiry slip

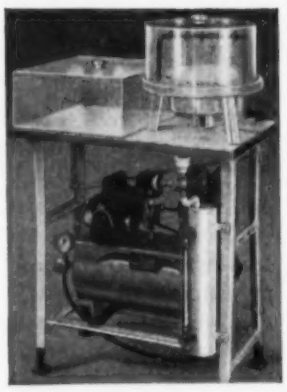
ELECTRIC PAINT REMOVER
peels 3½ sq ft per minute



Paint on interior and exterior wood surfaces, regardless of number of coats, can be removed to the bare wood at speed of 3½ sq ft per minute by this electric paint remover. Paint is softened electrically for easy peeling. Operating on either alternating or direct current, remover is retailed at $9.95. Made by **Shepherd Machine & Die Co.,** Dept. NED, 15215 Chatfield Ave., Cleveland, O.

For more details circle NED-379 A4 on enclosed inquiry slip

SALT SPRAY TESTER
has transparent testing compartment



Convenient observation of salt spray corrosion tests is possible with Lucite testing compartment and salt solution reservoir in this testing machine. It is designed for laboratory use or for running tests on small parts and samples and continuously subjects articles under test to a salt spray fog at room temperature. Testing compartment has 13¼-in. diameter and 8-in. height. Unit is powered by a ¼-hp compressor motor. Made by **Belke Mfg. Co.,** 941-47 N. Cicero Ave., Chicago 51, Ill.

For more details circle NED-380 A4 on enclosed inquiry slip

What FEATURES do YOU WANT in a UNIVERSAL JOINT?

- Maximum strength and bearing surface
- Quick-acting, dependable response
- Long service-life
- Optimum operating angle
- Close quarter operation
- Accurate surface grinding
- High concentricity
- Minimum weight

LOVEJOY HAS THEM ALL!

Available in 13 standard sizes—diameters ½" to 4"—bore ¼" to 2"—lengths 2" to 10⅝"

WRITE NOW FOR CATALOG AND PRICES

LOVEJOY FLEXIBLE COUPLING COMPANY

4803 W. LAKE STREET CHICAGO 44, ILLINOIS

Manufacturers of flexible couplings, universal joints, variable speed pulleys and variable speed transmissions.

For more details circle NED-381 A4 on enclosed inquiry slip

FOR A TOUGH NUT THERE'S NOTHING LIKE TASGON

Tasgon is your quickest, most penetrating rust solvent! Cuts through rust, gummed up oil and grease, hardened paint . . . loosens rusty or frozen nuts, bolts, couplings, fittings, any metal connections. Saves time, labor, and broken parts.

Tasgon comes in convenient 3 oz. cans for mechanics tool kits and in pints, quarts and gallons for shop and field use.

Write Today for a free sample can of Tasgon.

Samuel Cabot Inc.
132 Oliver Bldg., Boston 9, Mass.

For more details circle NED-382 A4 on enclosed inquiry slip

Handy, Husky, Hot— and it's NEW!

Weller's new model Soldering Guns give instant soldering heat up to *275 watts.* Completely new design—more versatile on all soldering jobs—from lab test bench to maintenance at the job site. Perfect balance; uniform heat at the tip—no waiting. Auxiliary tips for smoothing and cutting are inexpensive and easily interchanged with those used for soldering.

4 Models—single or dual heat, light or heavy duty, from 100 to 275 watts.

Shatterproof housing • Longer reach • Dual Spotlights

Order from your distributor, or write direct for bulletin.

Weller **SOLDERING GUNS**
809 Packer Street, Easton, Pa.

THE FINEST TOOLS FOR THE FINEST CRAFTSMEN

For more details circle NED-383 A4 on enclosed inquiry slip

Buffalo CASTERS

light, medium and heavy duty . . . for every need

There are Buffalo Casters to meet the requirements of your particular load, floor or job. A complete line of rigid, swivel, cone stem and trailer casters—with steel, rubber-tired, pneumatic or cushion wheels—sturdily built to give you long years of dependable, trouble-free service. Before you buy any casters, compare the selection and values offered by Buffalo.

BUFFALO CASTER & WHEEL CORP.
1032 Broadway, Hamilton, Illinois

SEND COUPON FOR FREE CATALOG

Buffalo Caster & Wheel Corp., Dept. 14
1032 Broadway, Hamilton, Illinois
Without obligation please send me complete information about Buffalo Caster and Wheels.

NAME_____
FIRM_____
ADDRESS_____
CITY_____ STATE_____

For more details circle NED-384 A4 on enclosed inquiry slip

See the NEW **UNISORB®** vibration and noise control exhibit

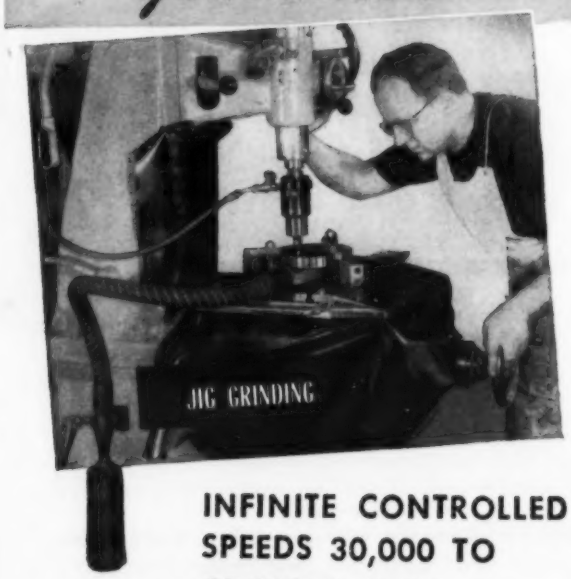
BOOTH 509 Plant Maintenance Show Chicago Jan. 25-28 1954

UNISORB is the modern mounting method for all types and sizes of machines in metalworking plants, textile mills, printing plants, etc.

the **FELTERS** company
224 South Street, Boston 11, Mass.

▲ For more details circle **NED-385 A4** on enclosed inquiry slip ▲

JIG GRINDING ACCURACY *guaranteed**



INFINITE CONTROLLED SPEEDS 30,000 TO 65,000 R. P. M.

Easily connect jig grinder to jig borer or mill

Then you can finish grind in hardened steel to "tenths" . . . jig grind dowel holes square with a ground base . . . move location of holes in hardened steel blocks . . . jig grind interchangeable holes in hardened sections . . . grind small holes with diamond impregnated mandrels . . . grind contours and relief with tungsten carbide burrs . . . grind radii in die sections . . . eliminate jig bushings in tools where close spacing is essential.

Other infinitely controlled air driven spindle applications

Place spindle on most any machine. Use it for finishing contours on hardened steel working surfaces . . . burring or milling die castings . . . routing wood contours . . . carbide milling or finishing slots . . . finishing holes in hardened steel to "tenths" . . . grinding with diamond wheels, carbide burrs, or diamond impregnated mandrels.

Advantages—10 micro finishes using carbide mills . . . 6 micro finishes using mounted points, operates at any angle . . . air driven, air cooled, overheating prevented . . . speed controlled at optimum point . . . 3 5/16" long motor uses little working space . . . By controlling speed at any point you abolish need for many constant speed spindles.

For immediate quotation please state machine tool application. Get this manual of photos showing operations Vulcanaire performs.

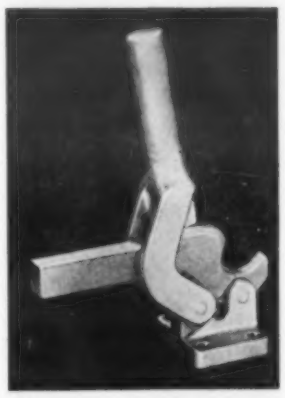
*Dependably accurate to "tenths"

Vulcanaire
It's built by toolmakers for toolmakers

VULCAN TOOL CO., 737 Lorain DAYTON 10, OHIO

▲ For more details circle **NED-386 A4** on enclosed inquiry slip ▲

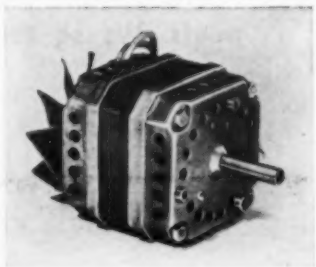
CAM-TYPE CLAMP
holds varying stock thicknesses



Holding pressure can be maintained with the Sesco cam clamp on stock thickness variations up to 1/8-in. such as found in castings and forgings. Clamps are constructed of steel with close - tolerance hardened working surfaces. Made in four standard sizes, they withstand vibration encountered on machining operations. Made by **Special Engineering Service, Inc.**, Dept. NED, 8161 Livernois Ave., Detroit 4, Mich.

▲ For more details circle **NED-387 A4** on enclosed inquiry slip ▲

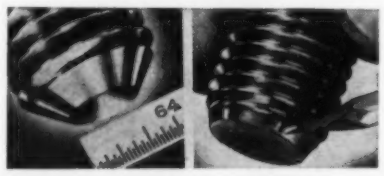
SHADED-POLE MOTOR
withstands high temperatures



Compact continuous duty model MS-3600 shaded-pole motor is built to withstand high temperatures and rough service. It is a four-pole alternating current motor, available in either two or four-coil design. Self-aligning oil-impregnated sleeve bearings and dynamically balanced rotors are incorporated. Operation is on 115-v, 60-cycle service. It can be equipped with external fan and any specified shaft diameter and length. Two-speed operation is optional. Made by **Electro Engineering Products Co.**, Dept. 4, 609 W. Lake St., Chicago 6, Ill.

▲ For more details circle **NED-388 A4** on enclosed inquiry slip ▲

SOCKET SCREWS
improved points on set and cap types



Improved types of points are being applied to Allen set and cap screws. Smaller cup point for set screws, called Allenpoint, replaces the ASA cup point set screws in Allen line. Improvement makes for greater locking at all measured installation vs. removal torque pressures, uniformly high shaft holding power and good holding power under vibration. This screw is made in Allenoy and stainless steel, with either National Coarse or National Fine threads. Cap screws now have an unthreaded leader point which reduces causes of screw thread injury and damage to threaded holes. Made by **Allen Mfg. Co.**, Dept. NE, 113 Sheldon St., Hartford, Conn.

▲ For more details circle **NED-389 A4** on enclosed inquiry slip ▲

PROMET The Engineered Bronze

BEARINGS
BUSHINGS
WEARING PARTS
(machined or rough cast)
FOR HYDRAULIC PUMPS

Promet #6 Packing Nut

Regulation of pump output can be only as precise as accuracy in manufacture permits. Promet packing nuts, packing glands, wear plates, connecting rods, rings, bushings, etc., assure the alloy best suited to the application, parts machined precisely to the specified tolerances.

The American Crucible laboratory is equipped to make complete chemical analysis of non-ferrous metals and alloys and all of the many tests of physical properties called for by modern specifications.

When American Crucible serves your bearing and wearing requirements, you get a money-back guarantee of longer service and lower maintenance cost.

Castings to your patterns—any size, shape or section up to 3,000 lbs. Pattern-making, designing and machining.

Write today for FREE LITERATURE and service data sheets. Send blueprints, conditions of operation and other data for recommendations and quotations.

THE AMERICAN CRUCIBLE PRODUCTS CO.
1327 Oberlin Avenue Lorain, Ohio, U.S.A.

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BEND, MELT, SOLDER, BRAZE

faster and more easily
with completely PORTABLE
BERNZ-O-MATIC
Instant lighting TORCH

Here is the ideal tool for all general factory maintenance and production line work.

- ***LIGHTWEIGHT***—only 3 lbs. full.
- ***PORTABLE***—fits in tool box or pocket. No heavy tanks or tangling hoses.
- ***LOW COST***—only $6.95 (retail).
- ***LONG BURNING***—disposable self-sealing cylinder has enough fuel for up to 15 hours burning time. When empty replace for only $1.95 (retail). Many accessories such as soldering tips, belt clip, stand, etc.

Stocked by leading hardware, plumbing, automotive and electrical wholesalers and mill supply houses. Or write for catalog page.

OTTO BERNZ CO., INC.
280 LYELL AVENUE • ROCHESTER, N. Y.

▲ For more details circle **NED-391 A4** on enclosed inquiry slip ▲

Add Years to Air Equipment Life— Use Filtered Air

All air lines collect moisture. Rust and dirt enter the lines, too, to clog lines, and shorten equipment life.

Give your air equipment top protection with Schrader Air Line Filters ahead of each air control unit. Schrader filters offer no restriction to full air flow, even after long use. Moisture is trapped in the bottom of the filter, can be drawn off through a drain cock.

See how Schrader Air Line Filters and other Schrader accessories can add to your effective use of air. Send for the Schrader catalog today.

A. SCHRADER'S SON
Division of Scovill Manufacturing Company, Incorporated
459 Vanderbilt Avenue, Dept. E-42, Brooklyn 17, N. Y.

▲ For more details circle **NED-392 A4** on enclosed inquiry slip ▲

FABRICS & TAPES For ALL INDUSTRY

FLIGHTEX FLIGHTEX FABRIC FABRICS

- GLASS
- COTTON
- VINYON
- DYNEL
- ORLON

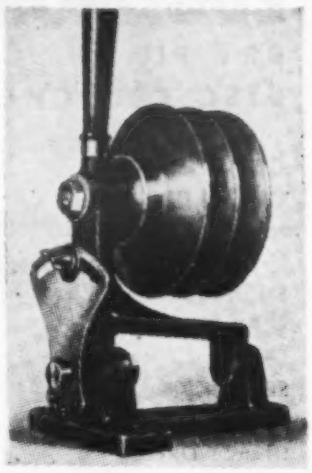
If you use special industrial fabrics and mechanical tapes, you'll find Flightex a dependable source of supply. Our staff of engineers is at your service to help solve your fabric and tape problems.

Write for Complete Information

FLIGHTEX FABRICS, Inc.
91 Worth Street New York 13, N. Y.

▲ For more details circle **NED-393 A4** on enclosed inquiry slip ▲

VARIABLE SPEED CONTROL



Variable speed control of V-belt and equipment up to a maximum 3 to 1 ratio is provided by this single lever controlled unit. Mechanically simple in design and sturdily constructed to withstand hardest service, models 1A and 2A Toledo variable speed controls have numerous unique features including: plain, smooth pulley, eliminating noise and vibration; stepless speed variation up to full 3 to 1 ratio; minimum pulley diameters are increased to transmit greater H.P. over entire range; new pulley design providing cylindrical bottom for V-belts which fixes minimum pitch diameter, preventing damage to belts and giving increased torque; single arm support, for easy belt application; large shaft, oilite bearings and lubricant reservoir; sector plate serving as dial indicator and additional locking medium; unusually attractive prices.

Wheel assemblies can also be purchased without mountings for application on machines providing built-in speed control.

If you have a variable speed control problem, either on plant equipment or on machinery you build for sale, investigate the Toledo variable speed control . . . you'll be interested in its efficiency and low price. Ratios as high as 10 to 1 are available. **The Toledo Timer Co.,** 2224 Albion St., Toledo, O. **Adv.**

▲ For more details circle **NED-394 A4** on enclosed inquiry slip ▲

Engineered Air Regulation

WHAT DO YOU REQUIRE OF AN AIR REGULATOR?

IS IT CAPACITY?

Kendall Model 10 Air Pressure Regulator gives up to 35 CFM with 90 PSI supply pressure

IS IT ACCURACY?

Increasing flow overcomes downstream line losses by jet tube venturi action in the Kendall Model 10

IS IT FREEDOM FROM SUPPLY PRESSURE INFLUENCE?

50 PSI variation in upstream pressure will result in less than 0.05 PSI change in downstream pressure on dead end service when you use a

KENDALL MODEL 10 AIR PRESSURE REGULATOR

AVAILABLE ¼" or ⅜" N. P. T.
RANGES 0-2, 10, 30, 60, 150 PSIG
Send for BULLETIN 4521

KENDALL CONTROLS CORPORATION
144 MOODY STREET WALTHAM 54, MASS.

▲ For more details circle **NED-395 A4** on enclosed inquiry slip ▲

SLASH PRODUCTION COSTS! and SAVE MATERIAL WITH RELIANCE SNAP RINGS

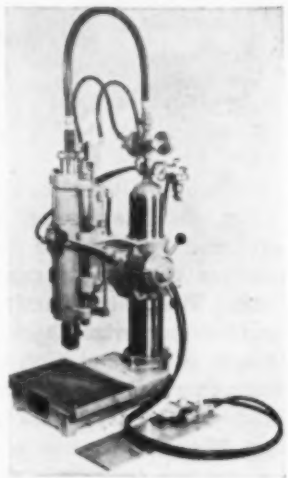
AVAILABLE IN VARIOUS CROSS SECTIONS OR END CUTS

SEND TODAY FOR FREE ENGINEERING BULLETIN 4K/3

RELIANCE DIVISION
EATON MANUFACTURING COMPANY
OFFICES AND PLANTS • MASSILLON, OHIO
SALES OFFICES:
NEW YORK • CLEVELAND • DETROIT • CHICAGO
ST. LOUIS • SAN FRANCISCO • MONTREAL

▲ For more details circle **NED-396 A4** on enclosed inquiry slip ▲

PNEUMATIC IMPACT PRESS
delivers 30 to 30,000-lb impact at speeds up to 10,000 cycles per hour

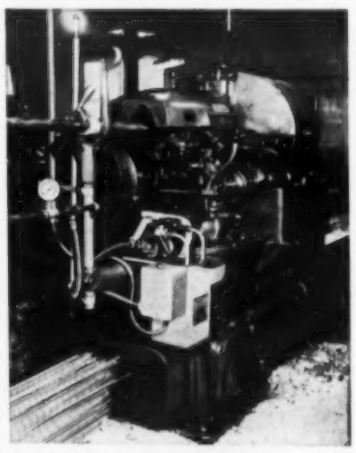


Complete uniformity of impact force on work pieces of varying thickness, operator safety and speed up to 10,000 cycles per hour are principle features of model 3-VS pneumatic impact press. Unit is useful on wide range of impact operations, either one-shot or progressive, including impression marking, stamping, staking, swaging, upsetting, riveting. Operation is on principle of variable stroke air hammer or piston-ram which moves within closed cylinder and strikes chuck projecting through bottom of cylinder.

On work of uniform thickness, clearance height of tool above work may be as little as 0.005-in. and machine will still deliver any desired impact force from 30 to 30,000 lb. On varying thicknesses, vertical clearance may be set for thickest piece, and within traverse range of 2¼ in., impact will be uniform on all pieces. With addition of time-dwell valve, press can be used for squeezing and heat branding without impact. Made by **Heidrich-Nourse Co.,** 635 E. Third St., Los Angeles 13, Calif.

▲ For more details circle **NED-397 A4** on enclosed inquiry slip ▲

HYDRAULIC STOCK FEED
for production bar machines

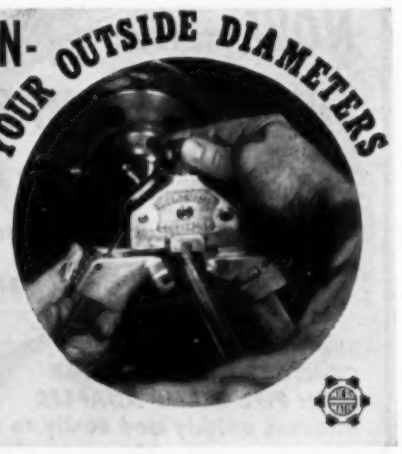


A hydraulic and self-contained bar feed attachment for screw machines, Hydra-Lite speeds stock handling and yet will not scratch or mar ground and polished stock. It is available in models for 00, 0 and 2 B & S machines and feeds stock from 1/16 to 1⅛ in. diameter. It is adjustable to feed up to 5 in. per stroke, and is provided with a light which flashes on to signal the approach of the end of a particular bar. Installation is simple, and regular feed mechanism is undisturbed so that it may be used if desired at any time. Unit has its own hydraulic system and pump. Made by **Aurora Precision Devices, Inc.,** 314 Anderson Blvd., Geneva, Ill.

▲ For more details circle **NED-398 A4** on enclosed inquiry slip ▲

PRECISION-FINISH YOUR OUTSIDE DIAMETERS

The Odee-HONE



★ ACCURATE
★ INEXPENSIVE
★ VERSATILE
★ LIGHTWEIGHT

Corrects out-of-roundness, waviness, chatter . . . Generates diametric size within .0001" tolerance . . . Hones all parts from ½" to 2½" in diameter—regardless of length or material . . .

Can be used on any lathe, drill press, electric drill . . .

Simple to set up and operate—no aligning, fixturing or wheel dressing is necessary . . .

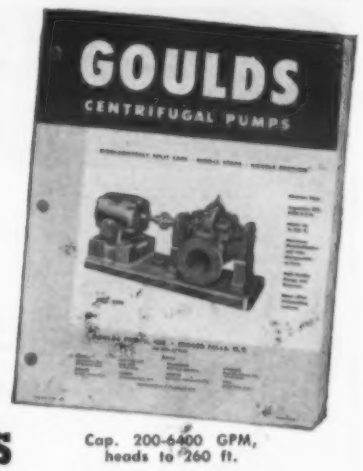
Removes a few "tenths" or a few "thousandths" stock in less time than it takes to re-center, indicate a part, and dress an abrasive wheel.

Write to:

MICROMATIC HONE CORPORATION
8100 SCHOOLCRAFT • DETROIT 38, MICHIGAN
Guilford, Conn. • Rockford, Ill. • Los Angeles 23, Cal. • Brantford, Ont., Canada

▲ For more details circle **NED-399 A4** on enclosed inquiry slip ▲

12 pages of facts about a NEW LINE of 19 pumps



Cap. 200-6400 GPM, heads to 260 ft.

Here's good news for pump buyers. The new Goulds Bulletin No. 721.6 gives you a host of information on the *extra* design features that are *standard* on Goulds new Fig. 3405 pumps.

Included are stuffing box bushings, steel-impeller keys, Teflon water seal rings — to mention a few.

This pump construction requires only three shaft and rotating parts assemblies (exclusive of wearing rings and impellers) to provide for 19 pump sizes.

But, get all the facts on how you can save on down time, maintenance costs and spare parts inventories. Write for Bulletin 721.6 today.

Goulds PUMPS INC.
Seneca Falls New York

▲ For more details circle **NED-400 A4** on enclosed inquiry slip ▲

Now you can SPRAY HOT WAXES

WITH Sta-Warm ELECTRICALLY HEATED

Spray gun assembly, flexible heated hose and pressure tank.

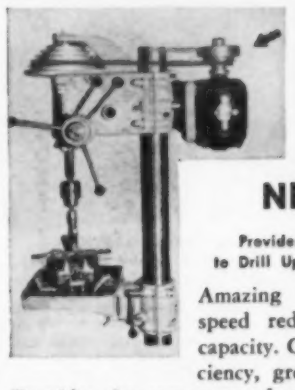
Countless cost cutting applications are now open to wax users who must coat objects too large to dip. Learn about this recently developed Sta-Warm procedure in the new bulletin just published.

Inquire today outlining your current problem!

Sta-Warm ELECTRIC CO.
130 N. CHESTNUT ST., RAVENNA, OHIO

▲ For more details circle **NED-401 A4** on enclosed inquiry slip ▲

New "PULL-GEAR" SPEED-REDUCING PULLEY
Increases Drill Press Capacity



NEW MODEL

Provides Correct Speed and Power to Drill Up to 1⅜" with ½ H.P. Motor

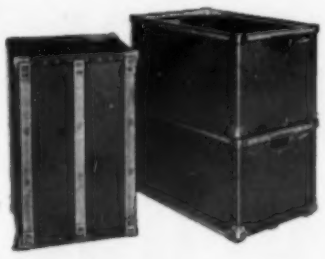
Amazing new internally geared speed reducer doubles drill press capacity. Greater power, greater efficiency, greater productivity.

Provides the correct speed and power for larger drilling, reaming, tapping and boring on light presses. Easily installed in five minutes. Adaptable to all type machines. Spindle speed range approx. 45 to 3000 RPM. Made in 3 motor shaft sizes: ½" - ⅝" - ¾". Write for literature.

Some Territories Open to Jobbers

THE PULL-GEAR CO.
4118 E. 8-Mile Rd., Detroit 34, Mich.
WRITE FOR LITERATURE

For more details circle NED-402 A4 on enclosed inquiry slip



Tough Babies!
THEY DEFY ROUGH HANDLING!

LOWER COST Material Handling favors these rugged items! Mill-box above features steel compound Top rail (see inset) and Bulge corners, both extraordinary wear-resisting. Note slat reinforcing and non-jamming "nesting limits"

BOTH BUILT BY "BAL" BUILT WITH A CONSCIENCE FOR MATERIAL HANDLING

Nesting tote boxes at right, also built with handles and strongly reinforced all-fibre; hard, vulcanized for severe usage.

ALSO HARD VULCANIZED FIBRE TRUCKS, DRUMS, SPECIAL CASES.

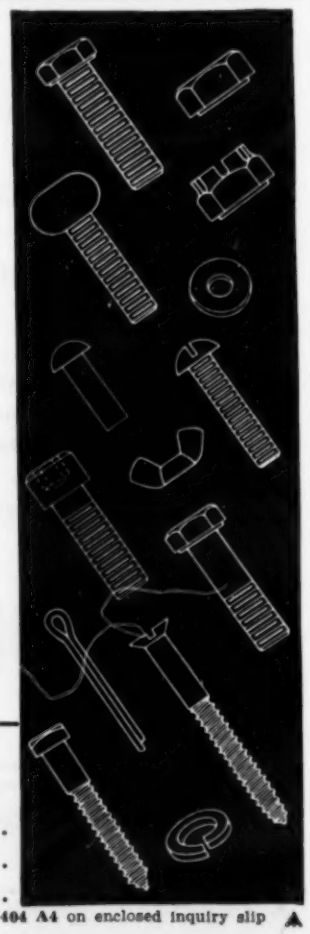
• Write for Catalog!

WILLIAM BAL CORPORATION
11 Johnson St, Newark 5, N. J.

For more details circle NED-403 A4 on enclosed inquiry slip

HARPER HAS THEM!
Everlasting Fastenings by the Dozen or the Million!

- Specialists in bolts, screws, nuts, rivets, washers and fastening accessories!
- In brass, bronze, copper, aluminum, stainless steels, Monel!
- For all problems involving corrosion, heat, abrasion, stress, appearance!
- America's largest producer of non-corrosive fastenings!
- Larger stocks, greater selection —over 7000 items!
- Deliveries from nearby warehouse and distributor stocks!
- Ask for complete Harper Price List and Stock Book!



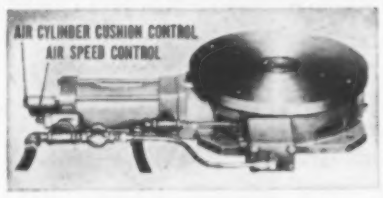
HARPER
EVERLASTING FASTENINGS

The H. M. Harper Company
8212 Lehigh Ave.
Morton Grove, Ill.
Rush Harper Price List and Stock Book.

Name.....
Address.....
City.....State.....

For more details circle NED-404 A4 on enclosed inquiry slip

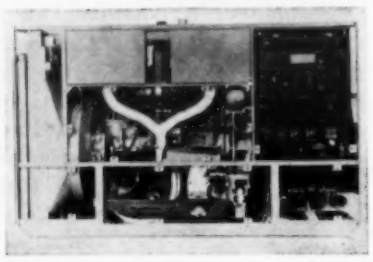
INDEX TABLE
features cushioned stop



Both cushioned stop and air speed are adjustable to compensate for variations in load weight and diameter in the model 1405 air index table. When operated with a 200-lb load and 22-in. diameter, using an eight-station ring, indexes are made at rate of 100 per minute. Speed of 60 indexes per minute can be maintained with a 300-lb load. The 15-in. diameter table is accurately ground and can be horizontally or vertically mounted. Either a 4, 6, 8 or 12-station ring is furnished as standard, but others up to 30 stations can be made to order. Made by **Air-Hydraulics, Inc.,** 231 Belden Rd., Jackson, Mich.

For more details circle NED-405 A4 on enclosed inquiry slip

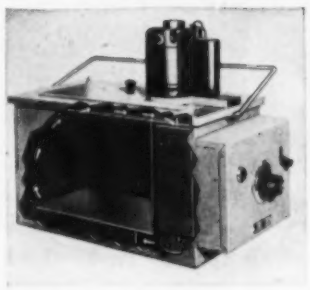
LIGHTWEIGHT GENERATOR SET
diesel powered, has 20 kw output



Lightweight O'Keefe & Merritt generator set PU-211G, powered by Hercules model D1X6-D 6-cylinder diesel engine, is air transportable and weighs under 2200 lb dry. It is rated at 20 kw, and is capable of producing 25 kw continuous output. It operates efficiently in temperatures ranging from −65 to 131° F at altitudes from sea level to 6500 ft. Further information is available from **Hercules Motors Corp.,** 111 Eleventh St. S.E., Canton 2, O.

For more details circle NED-406 A4 on enclosed inquiry slip

HOT DIPPING TANK
bench unit has 14 lb capacity



Bench - type production hot dipping tank for coating parts with protective or peelable plastics has 14-lb capacity and is available with or without agitator. It is thermostatically controlled to maintain load at desired temperature, and it has been found in tests to heat a full load from room temperature to 360° F in approximately 1 hr. It is available in various standard power ratings. Made by **Globe Imperial Corp.,** 2024 Kishwaukee St., Rockford, Ill.

For more details circle NED-407 A4 on enclosed inquiry slip

NOW — take PIPELINE TEMPERATURES ... without shutdown for thermocouple installation

This new BAYONET CONTACT THERMOCOUPLE WITH PIPE CLAMP ADAPTER attaches quickly and easily to the *outside* of a pipe—does not project into pipe. It is installed without inserting wells, tees or drilling and tapping holes. The sensitive tip is spring-loaded for good thermal contact and responds rapidly to temperature changes of the pipe surface. Furthermore, the thermocouple can be detached and used again elsewhere. Excellent for steam, process, or heat transfer lines where you must know temperatures at various points. Inexpensive ... accurate.

Standard adapters fit pipes from ¼" to 4". We can make even larger sizes, if you wish.

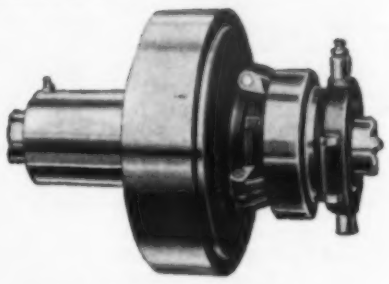
SEND FOR BULLETIN 22-100-T

Thermo Electric Co. Inc.
SADDLE RIVER TOWNSHIP—Rochelle Park P.O., NEW JERSEY
CANADA • THERMO ELECTRIC (Canada) Ltd., BRAMPTON, ONT.

For more details circle NED-408 A4 on enclosed inquiry slip

EDGEMONT TYPE SF
DRY PLATE DISC CLUTCHES

GEAR TOOTH OR PIN DRIVE for mounting V-BELT SHEAVES FLAT PULLEYS GEARS SPROCKETS OR DIRECT DRIVE



Backed by 40 years of clutch design and application experience

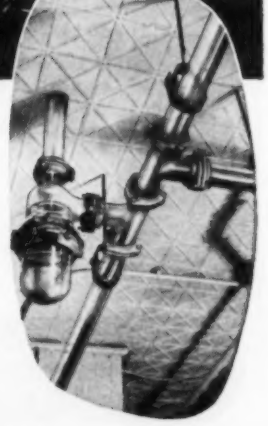
Type SF dry plate disc clutches are ideal for applications up to 3000 r.p.m. and in the types of mounting noted above. Type SF clutches are conservatively rated from ½ to 32 h.p. at 100 r.p.m. This design makes centrifugal force work with the operator to insure instant and positive release of the clutch. Single point, positive adjustment for liner wear is made without tools. Available for "built-in" engineered applications. Single or multiple disc types available according to service severity requirements. Write for Bulletin SF-5.

THE EDGEMONT MACHINE CO.
2201 HOME AVENUE • DAYTON 1, OHIO

For more details circle NED-409 A4 on enclosed inquiry slip

Use of PYREX pipe in acid drain lines eliminates corrosion.

Eliminate pipeline corrosion with PYREX® Glass Pipe brand



Chemical plants have been using PYREX brand Glass Pipe for years to solve their severest pipeline corrosion problems. Other industries are discovering its advantages for acid drain lines and other chemical handling lines.

PYREX pipe will withstand virtually all acids and most alkalis. For example, carrying 5% hydrochloric acid at 212° F. continuously, PYREX pipe loses only .0003" of its thickness a year. At that rate it would take over 200 years to eat away 30% of the wall thickness. It would take over 600 years to eat completely through the pipe.

In addition to such sturdy corrosion resistance, PYREX offers such advantages as transparency (you can spot trouble in the line before it gets serious); ease of cleaning; exceptional resistance to sudden temperature changes and physical shock. Long-time users report that breakage is no problem. Your own men can install it without special training or experience.

PYREX Pipe Bulletin EA-1 will give you a more detailed story. Write for a copy today or check the indicated reference number on the enclosed Inquiry Slip.

CORNING GLASS WORKS
CORNING, N. Y.

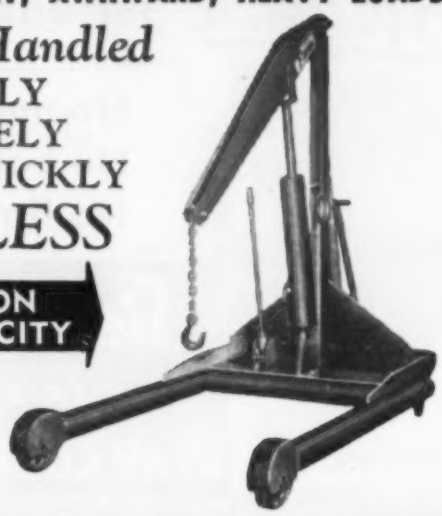
Corning means research in Glass

For more details circle NED-410 A4 on enclosed inquiry slip

BULKY, AWKWARD, HEAVY LOADS

Handled
· EASILY
· SAFELY
· QUICKLY
for LESS

2 TON CAPACITY



SUBSTITUTE FOR AN ELEPHANT®

GET THIS BOOK

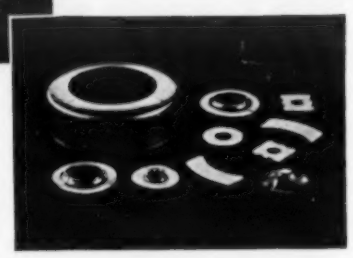
Gives all the facts about Ruger's complete line of hydraulic floor and truck mounted cranes, capacities 1000 to 6000 lbs.

RUGER CRANES

619 West Fourth St. UHRICHSVILLE, OHIO

▲ For more details circle NED-411 A4 on enclosed inquiry slip ▲

HOW TO SAVE MOLD COSTS...



on Insulators, Washers and Small Parts Plastic-Fabricated by

SILLCOCKS-MILLER

Sillcocks-Miller engineers now enable you to get small plastic parts, such as insulators, washers, etc. through a special fabricating process that saves the cost of molds.

The development of this process has opened the possibility of fabricating thin wall pieces such as insulators, etc., and offers economy without sacrifice of quality or service life.

You are invited to submit your specifications on small parts of this type for recommendation.

The SILLCOCKS-MILLER Company
Pioneers in Plastic Fabrication since 1910

30 West Parker Avenue · Maplewood, N. J.

▲ For more details circle NED-412 A4 on enclosed inquiry slip ▲

ITS FELT TIP WRITES ON EVERYTHING!

in BOLD or *fine* lines

Marking steel drums, tools, parts, pipes, etc. is smooth sailing with the Flo-master Felt-Tip Marker.

The complete range of ten colors in Flo-master Inks permits speedy and accurate identification for assembling, stocking, inspecting.

Flo-master semi-opaque inks — waterproof, non-smudging, fast-drying — are recommended for hard-to-mark surfaces using the KING SIZE Flo-master. For general purpose marking—cartons, cases, etc—use Transparent Inks with POCKET SIZE Flo-master (illustrated).

Contact your supplier or write direct to Cushman & Denison Manufacturing Co., 153 West 23rd Street, New York 11.

Flo-master
FELT-TIP MARKER

▲ For more details circle NED-413 A4 on enclosed inquiry slip ▲

POWER TOOL BENCHES
two sizes accommodate most tools

Only two sizes of all steel benches are required to mount an extensive standard line of small power tools such as drill presses, belt sanders, grinders, circular saws and planers. Both are adjustable to obtain the proper working height for each tool and for width. Model 2443 has height range of 24 to 33¼ in. and length adjustment from 23⅞ to 42½ in. Same figures for model 1424 are 24 to 33¼ in. and 14⅜ to 24 in. Made by **Morrison Products, Inc.**, 16818 Waterloo Rd., Cleveland 10, O.

▲ For more details circle NED-414 A4 on enclosed inquiry slip ▲

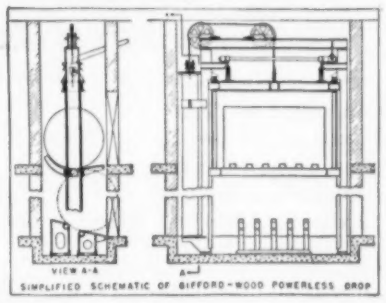
AIR HAMMER
for light duty service

Shown cleaning a concrete mixer blade, improved Big Bully air hammer can be used for a wide variety of cleaning, star drilling and other chipping operations. Hammer weighs 50 oz, and is approximately 6 in. long. Tools available include 28 different types. Made by **Superior Pneumatic & Mfg., Inc.**, 4758 Warner Rd., Cleveland 25, O.

▲ For more details circle NED-415 A4 on enclosed inquiry slip ▲

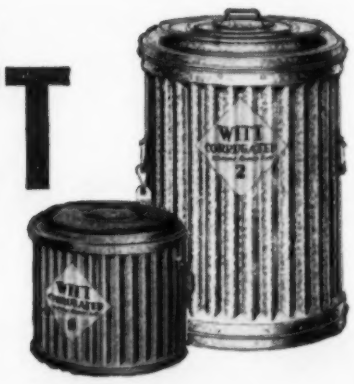
VERTICAL DROP
powerless, for cylindrical loads

Powerless vertical drop lowers cylindrical loads such as drums, barrels, and rolls from one floor to another and discharges them automatically. It is installed in a shaftway and operates on a counterweight principle, being damped by pneumatic action in both directions. Adjustable needle valve openings are situated at top and bottom of an air cylinder, through which air is forced as drop moves up or down. Carriage guides ride along replaceable plates mounted along sides of I-beams which form the drop framework. Made by **Gifford-Wood Co.**, 23 Hill St., Hudson, N. Y.



▲ For more details circle NED-416 A4 on enclosed inquiry slip ▲

If it's a
WITT
it will
REALLY
last!



WITT CANS and PAILS are designed and constructed to withstand years of hard usage and abuse. Every detail from the special analysis steel to the rust-resisting hot-dip galvanizing reflects the inherent quality of being able to "stand the gaff." Buy WITT and you buy the best quality—more for your dollar than that offered by any similar container regardless of price.

Compare **WITT CAN** *and* **PAIL** *features with others on these points . . .*

- STRAIGHT SIDES
- DEEP ROLLING CORRUGATIONS
- HEAVY GAUGE STEEL
- STEEL BANDS
- HOT DIP GALVANIZING
- STURDY LID

WITT CANS AND PAILS HAVE THE "RIGHT" ANGLE

Witt Cans

THE WITT CORNICE CO.
2124 WINCHELL AVE.
CINCINNATI 14, OHIO
Originators of Corrugated Can

▲ For more details circle NED-417 A4 on enclosed inquiry slip ▲

NAME THE CLEANING JOB

...you'll save every time with a WHEELABRATOR®

Wheelabrator . . . the modern centrifulgal method of airless abrasive blast cleaning slashes costs and cleaning time. Conserves power, labor, space. Its cleaning perfection results in longer tool life, faster machining and inspection.

Thousands are in use for cleaning castings, forgings, heat treated parts, stampings, weldments; plastic deflashing; cleaning used auto parts, drums, pipe, valves, floor scrubbers; descaling steel strip, sheet, plate, etc.

26 standard sizes and models plus numerous Special Designs available for every cleaning need. Write for Catolog 74-B.

American WHEELABRATOR & EQUIPMENT CORP. | 508 S. Byrkit St., Mishawaka, Indiana

▲ For more details circle NED-418 A4 on enclosed inquiry slip ▲

The Tough Jobs go to *Graham*
variable speed drives

most for the money
because . . .

- **ULTIMATE in SIMPLICITY and COMPACTNESS** — only the Graham is a straight line extension of a standard induction motor — or available without motor.
- **UNLIMITED SPEED RANGE** — from any desired maximum speed to zero, including reverse if wanted without stopping motor.
- **UNMATCHED ACCURACY** — of speed setting and resetting and speed holding.
- **NO PERISHABLE PARTS** — such as belts or tubes, requiring periodic replacement.
- **PROVED PERFORMANCE** — Fifteen years satisfactory use as standard equipment.
- **LOW COST** — a better job for less money.

Prompt Delivery on Standard Models

GRAHAM TRANSMISSIONS, INC.
Dept. NED, Menomonee Falls, Wis.

GET *Graham* *most reliable variable speed drive made*

ENGINEERED and RATED for 'ROUND the CLOCK SERVICE

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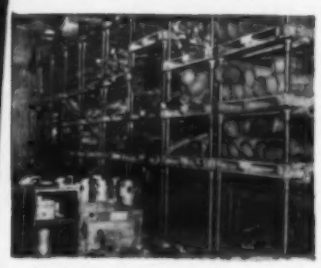
"Saved Cost of New Warehouse" says PALTIER USER

Paltier STORAGE SYSTEM



increases storage space up to **75%** and more — decreases man handling as much as **75%**

ASK US: PALTIER studies your storage problem —engineers and designs a system for your specific needs.

Many PALTIER installations pay for themselves "right from the start."

This booklet tells the PALTIER story, ask for it today.

THE PALTIER CORP.
1705 Kentucky St., Michigan City, Ind.

For more details circle NED-420 A4 on enclosed inquiry slip

YESTERDAY

Rust-proofing meant the "OIL BATH"

Messy, troublesome, expensive

TODAY CHEMICAL VAPOR MAKES IT EASY

Wrap Out Rust with **NOX-RUST Vapor-Wrapper**

chemically active, rust-preventive paper

Easy to use as wrapping paper, "Vapor-Wrapper" is quick, clean, and convenient for manufacturer and customer alike. Vapors from this chemically treated paper *stop rust* when you simply wrap or cover products.

With low-cost "Vapor-Wrapper," you can ship "factory fresh" products, speed production by elimination of dipping, draining, and drying operations, and eliminate laborious degreasing. Compare this new "matter of minutes" Vapor-Wrapper way with old-fashioned rustproofing . . . and say goodbye to your rustproofing "problems" forever!

Vapor Wrapper Conforms to Military Specifications MIL-P-3420, Packaging Materials, Volatile Corrosion Inhibitor Treated.

Let a "Corrosion Specialist" show you what this amazing paper can do in your plant . . . today!

NOX-RUST Chemical Corporation
333 N. Michigan Ave., Chicago 1, Ill.
Offices in Principal Cities

NOX-RUST VAPOR WRAPPER

Volatile Corrosion Inhibitors • Automobile Undercoating
Metal Cleaners • Rust Preventives • Sound Deadeners

Clip to your letterhead and write for facts today!

NOX-RUST Chemical Corporation
Dept. 129, 333 N. Michigan Ave., Chicago 1, Ill.
☐ Please send booklet on "Vapor-Wrapper"
☐ Please have a NOX-RUST "Corrosion Specialist" call.
Name____ Title____
Firm Name____
Address____
City____ Zone____ State____

For more details circle NED-421 A4 on enclosed inquiry slip

PORTABLE PLATING UNIT for production or laboratory use in bright gold or silver plating

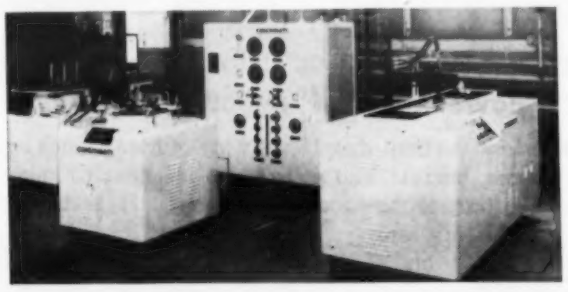
Both mass production plating of precious metals and small scale laboratory operations can be carried out with the portable Jet Plater. Unit consists of Sel-Rex selenium rectifier with automatic timer, stainless steel tank with water compartment for temperature control, movable work rack which can accommodate a portable plating barrel, stainless steel filter, polyethylene pump and safety tank to catch leakage or spillage.

Plater is designed for Sel-Rex bright gold process and bright silver Sol-U-Salt bath. "Jet" agitation at bottom of tank produces a continuous rapid solution movement. Standard models have 10, 20 and 30-gallon capacities, but units up to 100 gallons can be built. Made by **Sel-Rex Precious Metals, Inc.**, 231 Main St., Belleville 9, N. J.

For more details circle NED-422 A4 on enclosed inquiry slip

POWER CONTROL UNIT meters fuel gas and oxygen for selective heating operations

Accurate metering of fuel gas and oxygen for exact heat input in various selective heating operations can be achieved with this Flamatic power control



unit. It also controls pressure of water for cooling and quenching, air for actuating cylinders and electrical power for automatic cycling. Three available sizes have two, four and six mixed gas circuits respectively. Largest unit, No. 3, has maximum capacity of 4,500,000 Btu per hour, the equivalent of 1320 kw per hour.

All units operate at peak efficiency over entire output range. In illustration, control unit (center) is connected with combination hardening unit at extreme left; automatic indexing and brazing unit, left center; and progressive hardening unit at right. Developed by **Cincinnati Milling Machine Co.**, Flamatic Div., Marburg & South Sts., Cincinnati 9, O.

For more details circle NED-423 A4 on enclosed inquiry slip

Milled neoprene makes tough Stanzoils stand extra hours contact with oils, acids, caustics and solvents. *Milled* neoprene has higher tensile, tear resistance than *any other* oil resistant rubber.

Super-Safe grip creates confidence, speeds work—handles wet slippery objects as if dry.

Only a liquid-tight glove gives positive physical protection from conditions that cause dermatitis.

32 PIONEER styles, weights, sizes and colors. Stanzoil catalog quickly shows how to pick best, most economical glove for each job. Write for it today!

The PIONEER Rubber Company
234 Tiffin Road • Willard, Ohio

For more details circle NED-424 A4 on enclosed inquiry slip

Stripped for SAVINGS!

No nuts
No bolts
No flanges

Sier-Bath FLEXIBLE GEAR COUPLINGS

Save space, weight
Cut assembly costs
Slash down-time
Reduce equipment wear
Save power, labor

Compare! Only 7 parts...3/5 usual size, 1/2 usual weight...lower moments of inertia...can be run at higher speeds...put less strain on shafts, bearings, armatures...eliminate corrosion problems. NEW 16-page CATALOG on request. *Sier-Bath Gear & Pump Co., Inc., 9240 Hudson Boulevard, North Bergen, N. J.*

Call Your Sier-Bath Distributor or Representative

Founded 1905 Member A.G.M.A.
Also Manufacturers of Precision Gears and Rotary Pumps

For more details circle NED-425 A4 on enclosed inquiry slip

Chicago MOUNTED Wheels

...now even better with **79E BOND**

Buy Chicago Mounted Wheels—bonded with 79E Bond—and you'll never use any other!

79E—a tough new bond exclusive with Chicago Wheel—is the sensation of the industry . . . it does a BETTER grinding, burring, and finishing job FASTER. A size and shape for every use. Deliveries are excellent—Order today.

CHICAGO WHEEL & *Mfg. Co.*
Dept. NED • 1101 West Monroe Street, Chicago 7

For more details circle NED-426 A4 on enclosed inquiry slip

New Delrac Coating Coats, Penetrates and Seals

Concrete, Masonry, Wood, Steel

Steel won't rust; concrete won't dust; wood won't rot when coated with Delrac Coating, the new all-purpose protective coating. It is fungus-resistant, water-repellent, weather-resistant—with excellent penetration and adhesion. Available in transparent, white and grey and can be tinted any desired color by user. Shipped in 1- and 5-gallon containers.

Write for Bulletin 100

DELRAC CORPORATION
133 Mill Street Watertown, New York

For more details circle NED-427 A4 on enclosed inquiry slip

It's practically
WATER-WHITE
a NEW
chemically resistant
baking finish—
DURACHEM

For all types of metal products from heavy hardware to fine jewelry

A new baking type synthetic finish—DURACHEM—combines unusual clarity with a high degree of chemical resistance. Almost water-white—remains clear after exposure to heat and sunlight—resists salt spray and perspiration. Available in colors too.

Samples and technical literature on request

OUR 78th YEAR PIONEERS M&W.Co 1876 IN PROTECTION
MAAS & WALDSTEIN CO. 2116 McCARTER HIGHWAY NEWARK 4, NEW JERSEY
Midwest Div.: 1658 Carroll Ave., Chicago 12, Ill.
Pacific Coast Div.: Smith Davis Co., 10751 Venice Blvd., Los Angeles 34, Calif.
MANUFACTURERS OF INDUSTRIAL FINISHES

For more details circle **NED-428 A4** on enclosed inquiry slip

Spiral Ratchet Screw Drivers

With the fast, easy action of "YANKEE" Drivers, tough assembly jobs are a pushover. On thousands of applications like the one pictured above "YANKEE" Drivers speed work, cut costs on every unit—keep worker fatigue at a minimum. Made in two styles—regular and "quick-return". Accessories available.

See how "YANKEE" Drivers prove their value in speeding assembly on everything from baby strollers to oil burners. Write to address below.

FREE

ASK YOUR INDUSTRIAL DISTRIBUTOR TO SHOW YOU THE COMPLETE LINE OF "YANKEE" TIME-SAVING TOOLS.

NORTH BROS. MFG. CO.
205 West Lehigh Avenue
Philadelphia 33, Pa.
Division of Stanley Tools

STANLEY
Reg. U.S. Pat. Off.

For more details circle **NED-429 A4** on enclosed inquiry slip

Learn how Farval can protect your machine and save you money

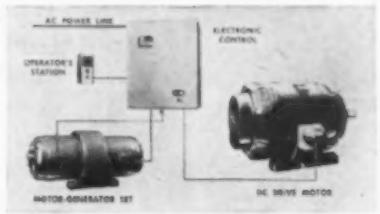
FREE—Just off press! Bulletin 26 has 20 pages of photographs, drawings, diagrams and text, showing the complete line of Farval systems. Send for it today.

● This new 20-page databook brings you up-to-date on centralized lubrication. Color drawings show step-by-step operation of the unique Farval Dualine valve. All types of systems illustrated—manual, heavy-duty automatic, light-duty automatic DC 20 and Farval Spray Valve. Also included are reports of user experience that indicate savings in oiling labor, lubricant, bearing expense and production time that you can expect on your *Farvalized* machines.

THE FARVAL CORPORATION
3283 East 80th Street • Cleveland 4, Ohio
Affiliate of The Cleveland Worm & Gear Company, Industrial Worm Gearing

For more details circle **NED-430 A4** on enclosed inquiry slip

VARIABLE SPEED DRIVES offered in 1/8 to 10-hp sizes are electronically controlled

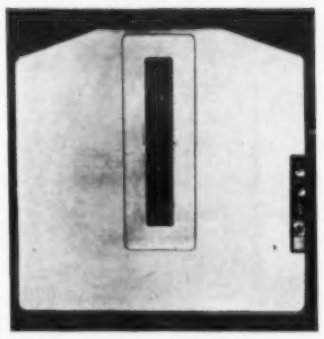


Electronic control of type GV Speedranger variable speed drive permits speed to be made responsive to signals based on speed, load, current, voltage, pressure, light, temperature or time. Three or two-phase alternating current power is converted by motor-generator set and electronic tube rectifiers to supply direct current for variable speed shunt wound motor. Drives are offered in 2 to 10 hp sizes and have basic speeds of 2400, 1750 and 1150 rpm. Drive speeds are adjustable down to one-sixth of basic speed for continuous duty, 50° C, and to one-tenth for intermittent duty.

Line also includes type EV Speedrangers in sizes 1/8 to 1½ hp which are similar in operation except no motor-generator set is used. Optional features for both types are jogging, reversing, dynamic braking and special duty cycles. Direct current drive can be supplied in all standard Master parallel or right angle shaft gearhead motors with ratios as high as 432 to 1. Made by **Master Electric Co.**, 126-66 Davis Ave., Dayton, O.

For more details circle **NED-431 A4** on enclosed inquiry slip

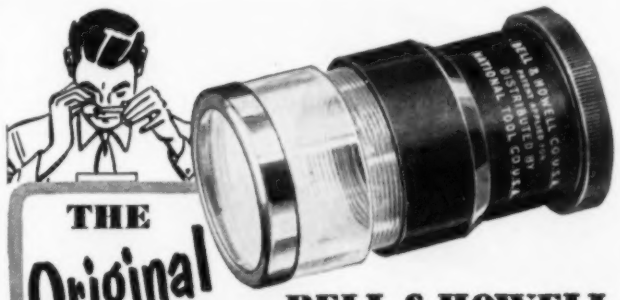
INDICATING DEVICE increases remote reading accuracy in process industry applications



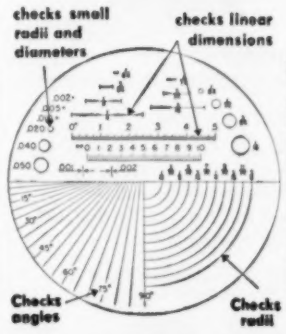
Reading accuracy of remote measurements on Fischer & Porter 54-OLX flow meter and Ratotronic transmission systems is increased through application of this remote indicating device. It consists of a moving strip scale behind a fixed horizontal hairline. Scale is always read at the same eye level to eliminate the problem of parallax. Total scale length of 72 in. provides a reading accuracy of better than one part in 2000 when scale divisions are 1/8-in. apart.

Calibrations can be in any desired units with maximum range of 5.5 to 1. Indicator can be located up to 2000 ft from the primary instrument with no accuracy loss (greater distances with special alignment). Up to four scales can be installed in a single case, all being fluorescent backlighted. Made by **Fischer & Porter Co.**, 10A Jacksonville Rd., Hatboro, Pa.

For more details circle **NED-432 A4** on enclosed inquiry slip



THE Original BELL & HOWELL Pocket Comparator



Saves time and money inspecting small dimensions

● Here's *guaranteed* accuracy in checking small dimensions at a price any business can easily afford. Save time and money measuring wear on cutting tools, checking forms and dimensions of punches, dies and gauges—as well as chamfers, threads and small holes on production parts.

Thousands in use by America's leading precision manufacturers. It's the greatest time-saver since the micrometer!

price only $36.00 order today

a product of BELL & HOWELL CO. distributed ONLY by

See Your National Tool Co. Representative or Local Jobber
NATIONAL TOOL CO.
11210 Madison Avenue Cleveland 2, Ohio

Write for FREE descriptive folder

For more details circle **NED-433 A4** on enclosed inquiry slip

HOW YOU CAN SAVE with ISOMODE* PAD vibration control

A standard, economical package of ten ISOMODE* PADS provides vibration control for as much as 80 tons of machinery—enough to demonstrate that you can save four ways:

1. Save bolting or lagging—machines stay put on any type floor.
2. Save workers' energy—noise levels go down.
3. Save through increased efficiency—vibration won't interfere with nearby equipment or offices.
4. Save maintenance—there's less strain on machines, less building damage.

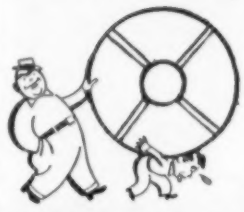
And all at small cost!, Simply cut to size—no waste. Write for price data and application bulletin No. 415.

*Trade Mark

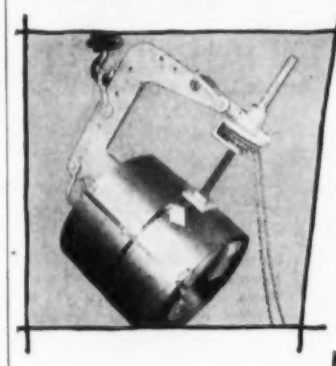
THE MB MANUFACTURING COMPANY, INC.
1066 State Street, New Haven 11, Conn.

For more details circle **NED-434 A4** on enclosed inquiry slip

Coil Handling Problem?



DIXON has the answer!

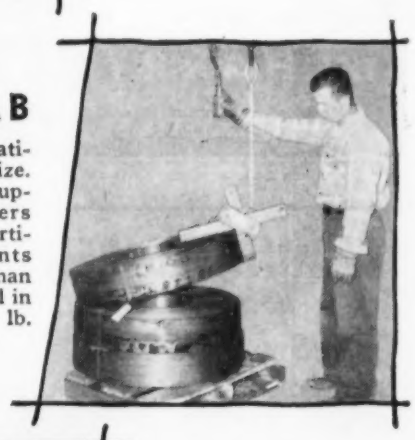


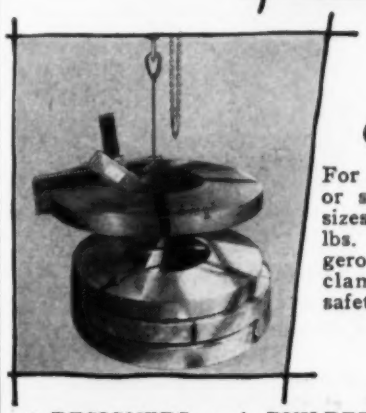
COIL HANDLER

Save space and avoid hazards by storing coils on end. Coils up to 48" wide can be lifted, turned and stacked. Available in 7,500, 10,000 and 15,000 lb. capacities.

COIL GRAB

Dixon Grab automatically adjusts to coil size. As crane hook moves upward the coil transfers from horizontal to vertical position. Prevents stock damage. One man can operate. Standard in 5 models up to 5,000 lb. capacities.





COIL LIFT

For ease in lifting, weighing, or stacking coils of varying sizes and weights up to 2,500 lbs. Pry-bars, chains, or dangerous makeshift hooks and clamps eliminated. Assures safety in handling.

● DESIGNERS and BUILDERS of SPECIAL CONVEYORS and HANDLING EQUIPMENT. Difficult problems requiring originality should be referred to our engineering department for quotation.

DIXON Automatic Tool Inc.
2303 TWENTY-THIRD AVE.
ROCKFORD • ILLINOIS

For more details circle **NED-435 A4** on enclosed inquiry slip

Is this your soldering problem, too?

Higher Speed with Smaller Tips?

The answer is—

HEXACON

SUPER POWERED SOLDERING IRONS

SIX MODELS TO CHOOSE FROM			
Tip Dia.	Watts	Cat No.	List Price
1/4	100	P-114	$8.25
1/4	150	P-154	9.00
1/4	200	P-214	10.00
3/8	200	P-238	10.00
1/2	200	P-212	10.00
3/8	300	P-338	13.25

Solder Faster with Lower Tip Cost!

For example, Cat. P-214 has more speed than conventional 200 watt iron, but takes ¼" tip instead of ⅝" *(only 1/6th the copper).*

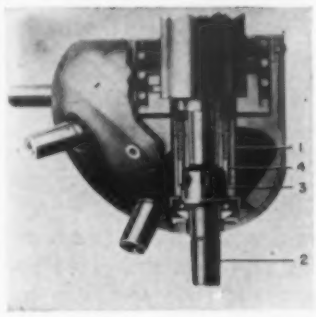
Write for Catalog showing 40 industrial soldering irons of every type and size; no obligation.

HEXACON ELECTRIC CO.
145 WEST CLAY AVENUE, ROSELLE PARK, NEW JERSEY

HEXACON — Industry's No. 1 Soldering Iron

For more details circle NED-436 A4 on enclosed inquiry slip

DRILL PRESS TURRET is equipped with six spindles for performing diverse operations

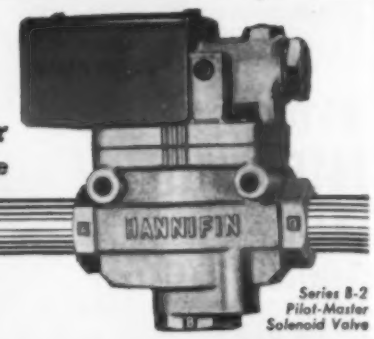


Any tool that can be held and driven by a ½-in. chuck, including those in excess of ½-in. diameter, can be used in the Lign-o-matic drill turret with Flying Dutchman drive. Efficiency of the drive is constant, regardless of the torque or end thrust. Turret is a six-spindle model for use on standard drill presses and, through indexing, permits six different operations to be performed on a single machine.

Model E turret can drill, ream, counterbore and tap (with reversible spindle machines). Driver (1) and turret spindle (2) automatically disengage during last ¾-in. of upward quill movement. Indexing is without stopping motor. When quill is lowered, driver automatically engages the selected turret spindle. Mating tapers (3) automatically align the turret spindle and two spring-loaded pins (4) engage slots in the spindle. Made by **Howe & Fant, Inc.,** 532 Flaxhill Rd., South Norwalk, Conn.

For more details circle NED-439 A4 on enclosed inquiry slip

Once a "P-M" Pilot-Master Air Control Valve is put in a line...it is



Series 8-2 Pilot-Master Solenoid Valve

never removed!

That's right: You use a pipe wrench only once...then never touch the piping again. To renew this valve you simply replace a cartridge that contains all the working parts. The valve body—a simple, sturdy housing—need never be removed from the line. Think of what this can mean to you in reduced down time and lower maintenance costs! Plan now to standardize on Hannifin Pilot-Master Valves.

- 2-way, 3-way and 4-way
- All sizes ¼" to 1¼"
- Pressures from 15 to 150 P.S.I.

WRITE FOR BULLETIN NO. 231

HANNIFIN

Hannifin Corporation, 1127 S. Kilbourn Ave., Chicago 24, Ill.
AIR AND HYDRAULIC CYLINDERS • PRESSES • AIR CONTROL VALVES

For more details circle NED-442 A4 on enclosed inquiry slip

WE'LL SEND YOU THIS WHOLESALE CATALOG FREE!

Save Money

OVER 9,000 ITEMS INCLUDING

THE HARRY ALTER CO.
1726 S. MICHIGAN AVE., CHICAGO 16
132 LAFAYETTE ST., NEW YORK 13

For more details circle NED-437 A4 on enclosed inquiry slip

EMERGENCY LIGHTING UNITS automatically charged units switch "on" if power fails

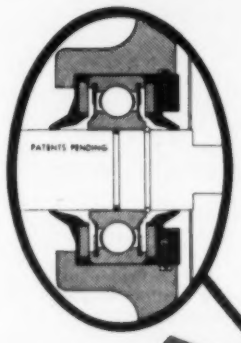
Designed to operate automatically in the event of power line failure, Exide Lightguard models M and T auxiliary lighting units are UL approved and are built around a 6-v storage battery with integral trickle charging arrangement from alternating current line. Both are furnished with one 25-w sealed beam lamp, but are available with two if desired. Lamps are adjustable to provide light in any direction and, depending on conditions, will illuminate up to 10,000 sq ft each. The one-lamp units give more than 8 hours of emergency lighting, the two-lamp units more than 3 hours.

Units are kept plugged into the power supply and are kept fully charged by a built-in trickle charger. They are turned on and off by means of an automatic relay. Model M can be charged at either trickle or high rate, selected by a panel-mounted toggle switch. Lamps of both units can be removed and mounted remotely. Made by **Electric Storage Battery Co.,** Dept. 1-AD, P. O. Box 8109, Philadelphia 1, Pa.

For more details circle NED-440 A4 on enclosed inquiry slip

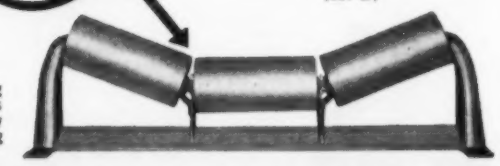
PERMANENTLY LUBRICATED
TRAN-SEAL SERVICE-PROVEN BELT CONVEYOR IDLER

ELIMINATES BELT CONVEYOR LUBRICATION COSTS!



Lubrication costs completely eliminated. This heavy duty Tran-Seal Idler never needs re-lubrication after it is installed. *Service-proven* design of bearing seals and special bearing cavity closures keep lubricant in and dirt out. For details, write TRANSALL, INC., 120 N. 11th St., Birmingham 4, Alabama.

(120-D)



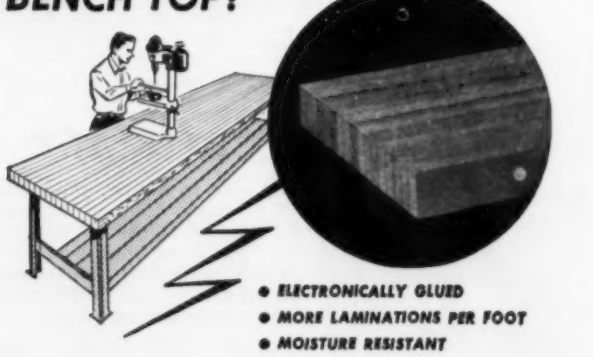
Each bearing assembly is protected by four bearing seals.

TRANSALL SECTIONAL BELT CONVEYOR SYSTEMS

For more details circle NED-443 A4 on enclosed inquiry slip

LAMINATED BENCH TOPS

• NOTHING—BUT NOTHING TOPS A TOLCO BENCH TOP!



- ELECTRONICALLY GLUED
- MORE LAMINATIONS PER FOOT
- MOISTURE RESISTANT

Tolco Northern Maple, laminated assembly bench tops are built by the originators of electronic gluing. Skilled craftsmen blend their talents with the finest quality lumber available to bring you the supreme product in the laminated bench and table top industry. Tolco tops have more laminations per board foot than any other giving them superior strength and resistance to wear and tear. Special processing makes Tolco tops especially resistant to moisture and warpage. Write today for full color catalog illustrating and describing this outstanding product. Prices on request.

THE TOLERTON COMPANY
P. O. Box D 658 Alliance, Ohio
Established 1894

For more details circle NED-438 A4 on enclosed inquiry slip

FORT WORTH INDUSTRIAL EXHAUST FANS

FOR PNEUMATIC CONVEYING AND DUST COLLECTING SYSTEMS

THE HEART of AIR HANDLING IS THE FAN

FORT WORTH

S-2 EXHAUST FAN has many features that assure satisfactory operation

- ★ Direction of discharge easily changed
- ★ Direction of rotation easily changed
- ★ Housing, blastwheel, and bearing stand are ruggedly constructed for vibration free operation
- ★ Designed for efficient operation
- ★ Exclusive Paddle-type construction enables blastwheel to handle long stringy material through fan.
- ★ Bearings: two anti-friction, self-aligning pillow blocks

Write for catalog 500, which gives performance data and dimensions of Fort Worth Exhaust Fans.

FORT WORTH STEEL AND MACHINERY CO
Dept. 221, 3600 McCart, Fort Worth, Texas

FORT WORTH WAREHOUSES:
• CHICAGO • ST. LOUIS • KANSAS CITY • MEMPHIS • ATLANTA • JERSEY CITY • LOS ANGELES • SAN FRANCISCO • HOUSTON

OTHER FORT WORTH PRODUCTS: ROLLER CHAIN SPROCKETS SCREW CONVEYORS and ACCESSORIES SCREW ELEVATORS

For more details circle NED-441 A4 on enclosed inquiry slip

TOOL of a THOUSAND USES

TRI-SAW, All-Purpose, Portable Power Hacksaw

Still the same low price. ONLY $37.50

Makes Any Cutting Job Quick . . . Easy . . . Economical

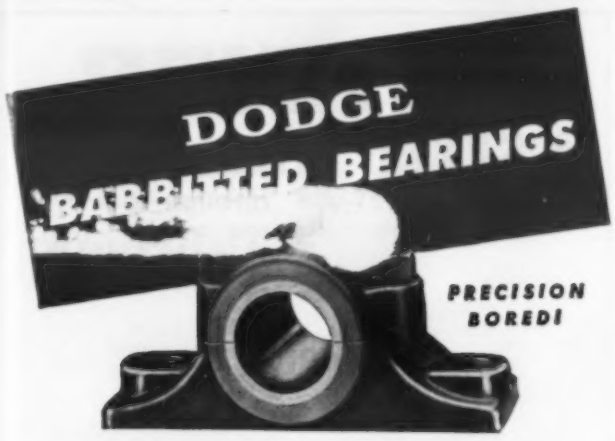
Simply attach Tri-Saw to any 1/4" or 5/16" heavy duty drill—then zip through wood, sheet metal, heavy metal, nails, pipe and what have you, in seconds! Use this sensational time and work saving tool and you'll say it's the best all-purpose saw on the market. Only Tri-Saw gives you these exceptional features:

- No side torque or spin
- One shot lubrication
- Completely replaceable high speed bearings
- Improved dirt seal
- Needs no starting hole

See Tri-Saw at your jobber or write us for descriptive literature

MANUFACTURED BY
TRI-SAW CORPORATION
2207 HANLEY INDUSTRIAL COURT • ST. LOUIS 17, MISSOURI

For more details circle NED-444 A4 on enclosed inquiry slip



● There's a *big* difference between a Dodge Journal Bearing and a common flat box — a difference that pays off in longer years of service, smoother operation, power savings! Dodge Journal Bearings are precision bored and faced — to insure maximum bearing surface for radial and thrust loads . . . Solid or Split Journal. Shaft sizes from 1/2" to 3-15/16". Stocked by Dodge distributors. Write us for full details.

DODGE MANUFACTURING CORPORATION, 2100 Union St., Mishawaka, Ind.

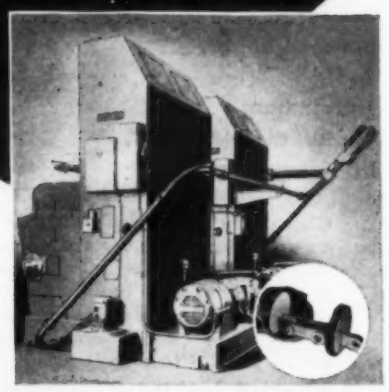
DODGE of Mishawaka, Ind.

FIRST IN POWER TRANSMISSION MACHINERY

For more details circle NED-445 A4 on enclosed inquiry slip

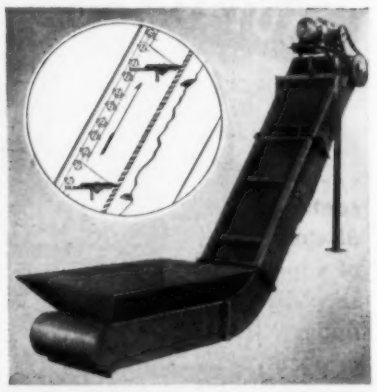
HERE'S HELP!

Hapman CONVEYORS offer TWO WAYS to REMOVE CHIPS AUTOMATICALLY



TUBULAR CONVEYOR HANDLES SMALL CHIPS

. . . from machine tools like these Oilgear Vertical Broaching Machines, using one Hapman Conveyor with *patented* Sealed-pin Chain and tough Neoprene Flights. Tubular Conveyor will also handle abrasive dusts, scale, sludges, welding flux.



Chip-O-Matic TYPE REMOVES SPIRAL TURNINGS

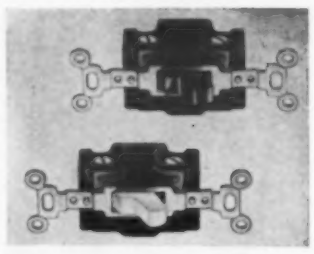
. . . large chips, small parts, stampings and scrap automatically. Simple and dependable in design, this money-saving conveyor can be adapted to remove parts from coolant tanks *without* loss of coolant. Also has Sealed-pin Chain and Rib Flights with Neoprene wear strips.

GET DETAILS ON BOTH COST-CUTTING TYPES — WRITE FOR:
Tubular Conveyor Bulletin ND-154
Chip-O-Matic Bulletin C -ND-154

Hapman CONVEYORS, INC.
DIVISION HAPMAN-DUTTON COMPANY
KALAMAZOO MICHIGAN

For more details circle NED-446 A4 on enclosed inquiry slip

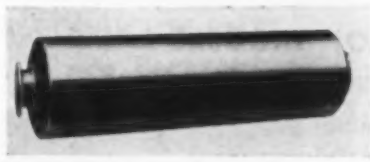
SWITCHES
for 15 and 20-amp ac service



Available in both 15 and 20-amp types, Super Switches are made in single-pole, double-pole and three-way styles with either brown or ivory toggles. Rating is from 120 to 277 v ac. Switches can be mounted in any position, and are arranged for back or side wiring. The 20-amp types are distinguished by their red cover. Units are UL approved for use for fluorescent, inductive, incandescent lamp and motor loads. Made by **Pass & Seymour, Inc.**, 50 Boyd Ave., Syracuse 9, N. Y.

For more details circle NED-447 A4 on enclosed inquiry slip

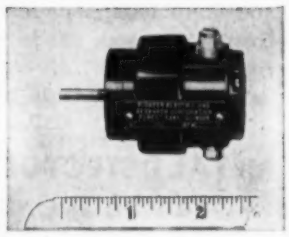
SILENCERS
for compressors, blowers and pumps



High velocity air expelled to the atmosphere by air compressors, blowers, vacuum pumps and other machines can have its noise quieted by two series of improved exhaust silencers. They are designed for operation under moisture-free air conditions and for temperatures up to 200° F. Both feature minimum restriction to air flow. Special sound-absorbing material can be used for operation above standard temperature. CA series is available in pipe sizes up to 6 in., while LCA series is for sizes larger than 6 in. Made by **Burgess-Manning Co.**, Libertyville, Ill.

For more details circle NED-448 A4 on enclosed inquiry slip

PERMANENT MAGNET MOTOR
miniature units 0.004 to 0.0165-hp



Horsepower rating from 0.004 to 0.0165, speeds from 2000 to 20,000 rpm and total weights from 3.5 to 9 oz are features offered by this miniature permanent magnet motor or generator. Smaller than standard pack of cigarettes, motor is made with its magnetic structure cast into aluminum housing. Optional features are water tight and explosionproof housing, fungicided armature, noise filter, speed governor and gear reducer. Voltage range is 6 to 110 dc. Commutator is 14 bar, with 35-bar type available for special applications. Used as generator, unit at 6000 rpm offers 1.5 to 8-w output range. Motor-generator combinations are also available. Made by **Pioneer Electric & Research Corp.**, Forest Park, Ill.

For more details circle NED-449 A4 on enclosed inquiry slip

PREVENTIVE MAINTENANCE eliminates truck downtime

READY-POWER IS BEST FOR PREVENTIVE MAINTENANCE

Tie up a truck because of power failure? Never! Equip your fleet with *interchangeable* Ready-Power gas-electric units and, then, have one extra for the shop. Thus, power units can be rotated for preventive maintenance . . . and your trucks stay *ON THE JOB.*

CONTINUOUS-DUTY POWER UNITS

The READY-POWER Co.
3832 Grand River Ave., Detroit 8, Michigan
Manufacturers of Gas and Diesel Engine-Driven Generators and Air Conditioning Units; Gas and Diesel-Electric Power Units for Industrial Trucks

For more details circle NED-450 A4 on enclosed inquiry slip

YOU'LL GET years and years of BOX ACCURATE performance . . .

THOUSANDS OF REDINGTON COUNTERS, many put into service 20, 30, and 40 years ago, are still in continuous use...*and still functioning perfectly!*

REDINGTONS are widely used on
● PUNCH PRESSES ● SHEETERS ● DRILL PRESSES ● CONVEYOR LINES ● PACKAGING MACHINES BENCH OPERATIONS
and wherever a positive stroke Counter can be used. Sturdy, reliable REDINGTONS have been standard equipment for years on such well-known printing presses as *C&P, Kluge, Kelly, Banthin, Mieble, etc.*

EQUIP ALL YOUR MACHINES NOW WITH THE UNIT YOU CAN COUNT ON!

Send today for this free illustrated catalog NED, showing all models, applications, prices and quantity discounts.

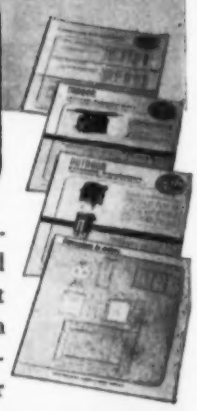
CHECK THESE LONG-LIFE, HIGH-EFFICIENCY FEATURES:
1) Easy-to-read white on black numerals integral with double-injected plastic wheels — can't wear off! 2) Handsome wear-resistant black crackle finish, 3) Handy reset knob, 4) All-purpose mounting bracket, 5) ALL WORKING PARTS OF STEEL.
Every REDINGTON is fully guaranteed!

F.B. REDINGTON CO. 101 S. SANGAMON ST., CHICAGO 7, ILL.

For more details circle NED-451 A4 on enclosed inquiry slip

NEW DIMENSION SHEETS Give Complete Information

ALLIS-CHALMERS INSTRUMENT TRANSFORMERS



Just off the press — all the mechanical and electrical information you need in a convenient, completely bound set of data sheets. Gives most thorough presentation of entire line of Allis-Chalmers instrument transformers ever published. Get your copy from your nearest A-C district office or write:

Allis-Chalmers, Milwaukee 1, Wis.

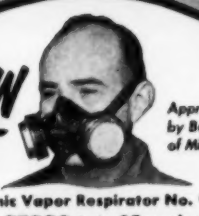
A-4113

ALLIS-CHALMERS

For more details circle NED-452 A4 on enclosed inquiry slip

CESCO RIGHT... before your Eyes!

NEW



Approved by Bureau of Mines

Organic Vapor Respirator No. 99
• New CESCO twin 85 cc absorbent cartridge respirator has positive acting inhale-exhale valves which prevent rebreathing or exhausting through cartridges. Valves replaced without tools. Cartridges replaced by unscrewing retaining caps. B of M approval No. 2307.

Converts to Dust Respirator No. 96
• Replace vapor cartridges with CESCO filter pads to make No. 96 Dust Respirator. Treated wool-felt filters use entire frontal surface, provide maximum efficiency, little breathing resistance. B of M approval No. 2167.

Dual Purpose Saves Money
• CESCO Respirators have contoured facepiece for snug, comfortable, leak-proof fit. You buy only one respirator and elements as desired.

Send TODAY for CESCO literature

CHICAGO EYE SHIELD COMPANY • 2322 Warren Blvd. • Chicago 12, Ill.

CESCO FOR SAFETY

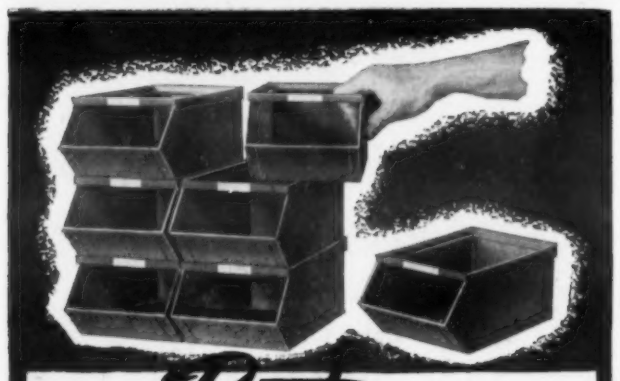
OFFICES IN: Atlanta, Birmingham, Boston, Buffalo, Cincinnati, Cleveland, Columbus, Detroit, East Orange, Houston, Kansas City, Knoxville, Little Rock, Los Angeles, Mexico City, D. F., Milwaukee, Minneapolis, Philadelphia, Pittsburgh, Salt Lake City, San Francisco, Spokane, St. Louis, St. Paul, Toledo, Tulsa

For more details circle NED-453 A4 on enclosed inquiry slip

If you use gears in the product you make, we believe it will pay you, as it has others, to become acquainted with FAIRFIELD—the place where fine gears are produced to meet your specifications EFFICIENTLY, ECONOMICALLY! Fairfield's production facilities are unexcelled for making all kinds of high precision, automotive type gears such as are now finding wide use in all branches of industry: for tractors, trucks, and buses . . . for agricultural implements . . . for construction machinery . . . for machine tools. Ask for latest literature describing Fairfield's facilities. Your inquiry will receive prompt attention.

FAIRFIELD
Manufacturing Co.
2335 S. Concord Road
LAFAYETTE, INDIANA

For more details circle **NED-454 A4** on enclosed inquiry slip



Parts...

★ Where You Want Them . . .
★ When You Want Them

You'll save time, space and labor handling parts and material when you use these patented STACKBINS.® STACKBINS keep parts instantly accessible—eliminate waste hand motions—stack compactly to form units of exactly the right shape and capacity—make order filling or assembly work faster, easier, more efficient. Heavy steel, all-welded construction. Sizes from 3½" x 6" x 3¼" to 15" x 24" x 11".

Manufactured and sold in Canada exclusively by Wickware-Stackbin, Ltd., Ottawa

Write Stackbin Corp., 1081 Main Street, Pawtucket, R. I.

STACKBIN SYSTEM
"Stacked and Still Accessible"

For more details circle **NED-455 A4** on enclosed inquiry slip

TO REACH HIGH PLACES SAFELY...

This illustrated folder describes the complete line of Ballymore ladders that are saving time and money and increasing capacity of storage space in business and industry. Send for your free copy today.

BALLYMORE COMPANY
WAYNE 3, PENNSYLVANIA

Name_____
Company_____
Address_____
City_____ Zone_____ State_____

For more details circle **NED-456 A4** on enclosed inquiry slip

PNEUMATIC DIE CUSHION
with 2 to 7-in. piston diameters

A hardened and ground pin pressure pad, custom-made to specific die and punch press requirements is provided on model CR self-contained pneumatic die cushion. This all-steel unit can be fastened directly to bolster plate by one simple drilled and tapped hole, or passed through bolster plate and fastened directly to die shoe. Combination reducing regulating valve and pressure gage records working pressure on cushion cylinder at all times. Available piston diameters range from 2 to 7 in. Made by **Dayton Rogers Mfg. Co.**, 2822 Thirteenth Ave. S., Minneapolis 7, Minn.

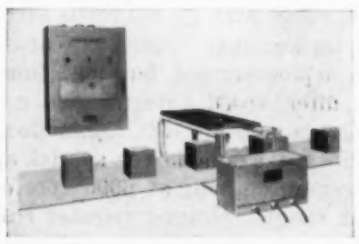
For more details circle **NED-457 A4** on enclosed inquiry slip

EXPLOSIONPROOF TROUBLE LAMP
safe for hazardous locations

Provided with a 12-v auto lamp giving a powerful concentrated light beam, type EPLH trouble lamp is explosionproof and designed for use in hazardous locations. It has a cast aluminum lamp chamber, concentrating lens, composition handle, support hook and explosionproof cord connector with mechanical cord grip. If the lamp socket should arc and cause an explosion in the lamp compartment, flame tight threaded joints confine the explosion to the inside of the lamp chamber. A 120/12-v explosionproof transformer is used. Made by **Crouse-Hinds Co.**, 7 North St., Syracuse, N. Y.

For more details circle **NED-458 A4** on enclosed inquiry slip

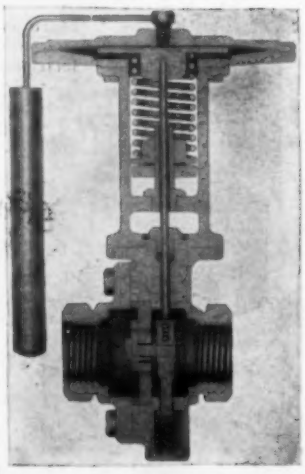
METAL DETECTOR
can be installed around conveyors



Manufacturing processes involving inspection of nonmagnetic and nonconductive materials are served by this G-E general purpose metal detector. It can be installed around conveyor systems without cutting the belt and can be adapted to special applications. Belt speeds can range from 90 to 500 fpm. Unit detects metal particles in such products as cereals, packaged food, logs and ore. A red light acts as an alarm signal when metal passes through the coil. Two standard coils are a rectangular model with inside measurements of 33 x 10 in. and a circular coil with a 4-ft diameter. Special sizes can be made. Made by **General Electric Co.**, Schenectady 5, N. Y.

For more details circle **NED-459 A4** on enclosed inquiry slip

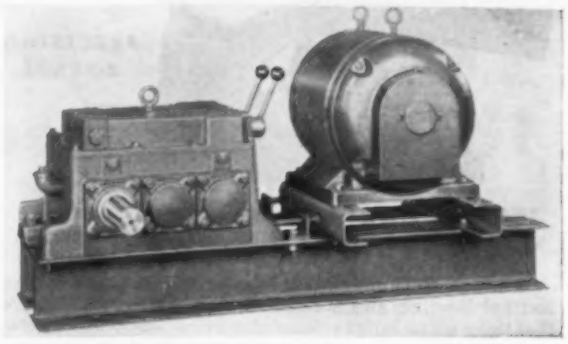
TEMPERATURE CONTROL VALVE
has sliding gate shutoff



Use of guide bushing and pistons is eliminated in Figure 80 temperature control valve to reduce number of parts. Positive shutoff is assured by self-lapping, wiping action of sliding gate as it moves over orifice plate. Metallic diaphragm eliminates hazard of ruptures. Valve is offered in ¼ to 2-in. sizes made in cast iron, bronze, carbon steel and all castable stainless steel alloys. Sliding gate and orifice plate are hardened stainless steel. Made by **Jordan Regulator Corp.**, Dept. A, 1609-10 Carew Tower, Cincinnati 2, O.

For more details circle **NED-460 A4** on enclosed inquiry slip

TURNER
4-SPEED Transmission
from fractional HP through 60 HP
TURNER MOTOR ▼



Here is the answer to many power transmission problems. A four speed transmission in sizes from fractional HP through 60 HP. For use with any speed electric motor or engine. Available in a wide range of speed ratios including certain six and nine speed transmissions.

WRITE US TODAY — OUTLINE THE DESIRED OUTPUT SPEEDS, SIZE AND SPEED OF MOTOR OR ENGINE, A BRIEF DESCRIPTION OF YOUR PROBLEM AND WE WILL FORWARD COMPLETE DETAILS.

TURNER UNI-DRIVE CO.
3485 Terrace Street Kansas City 8, Mo.

For more details circle **NED-461 A4** on enclosed inquiry slip

cochrane

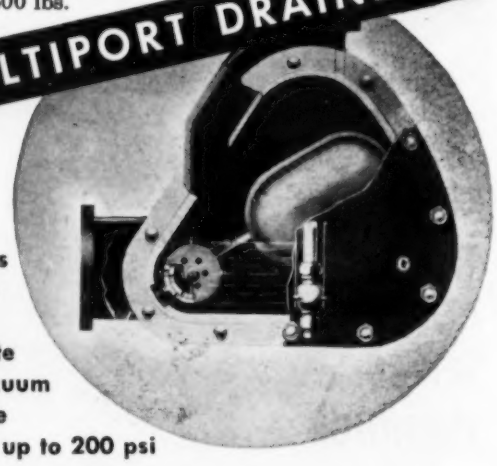
ALL SERVICE SEPARATORS

. . . for removal of liquid entrainment (water, oil, etc.) from vapors-gases

Clean, dry vapor-gas (steam, compressed air) is assured at point of use since liquid entrainment is effectively separated by a scientifically designed, impingement type baffle and immediately moved to the separator drain. Separated liquid cannot be wiped or carried over or under baffle to the outlet path. Pressure loss is practically nil since areaways through separator are much greater than cross-sectional area of inlet.

In all sizes ½" to 12" for working pressures up to 600 lbs.

MULTIPORT DRAINERS



. . . for continuous discharge of vapor condensate under vacuum or positive pressures up to 200 psi

Instantaneous response • Tremendous discharge capacity due to large port areas • Only one moving element • Self-regulating, self-cleaning cylindrical valve never leaves seat • Position handle outside body permits manual closing or opening wide to serve as an effective blow-off • Several types in many capacities available.

Write today for full details.

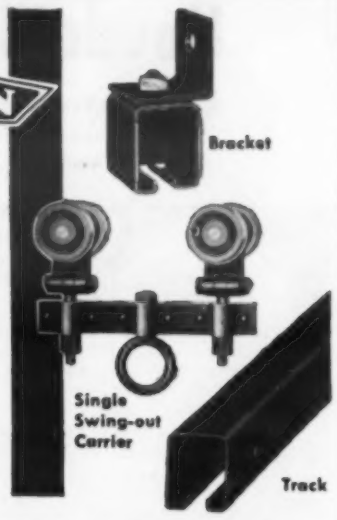
cochrane corporation
3143 N. 17th Street, Philadelphia 32, Pa.
Representatives in principal cities of U.S.A.

For more details circle **NED-462 A4** on enclosed inquiry slip

COBURN

OVERHEAD CONVEYING EQUIPMENT

simple, easy installation



Coburn track, brackets and carriers are simple in design . . . present no complicated installation problems. In fact, your own plant personnel can easily handle the job. Inexpensive re-arrangement or extension can also be made at any time because of the section design of Coburn Overhead Monorail.

Write for Catalog #220 to Coburn Sales and Engineering, 56 Sterling Street, Clinton, Mass.

THE COLORADO FUEL AND IRON CORPORATION • Denver and Oakland
WICKWIRE SPENCER STEEL DIVISION • Atlanta • Boston • Buffalo
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COBURN PRODUCTS
PRODUCTS OF WICKWIRE SPENCER STEEL DIVISION
THE COLORADO FUEL AND IRON CORPORATION CFI

▲ For more details circle NED-463 A4 on enclosed inquiry slip ▲

SEE HOW General CAN CUT YOUR PACKAGING AND SHIPPING COSTS . . .

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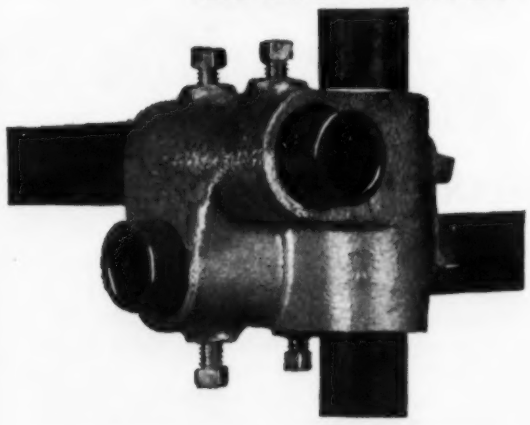
Des Plaines, Illinois

Factories: Cincinnati; Denville, N. J.; Detroit, East St. Louis, Kansas City, Louisville, Milwaukee; Prescott, Ark.; Sheboygan; Winchendon Mass.; General Box Company of Mississippi, Meridian, Miss.; Continental Box Company, Inc., Houston.

▲ For more details circle NED-464 A4 on enclosed inquiry slip ▲

MAKE YOUR OWN SCAFFOLDS AND RACKS WITH PIPE



FOR MAINTENANCE AND CONSTRUCTION

Safe, durable, adjustable, rolling and frame scaffolds for ALL jobs.

FOR ADJUSTABLE STORAGE RACKS

Material racks, pallet racks, bench frames and portable bleachers are also erected with:

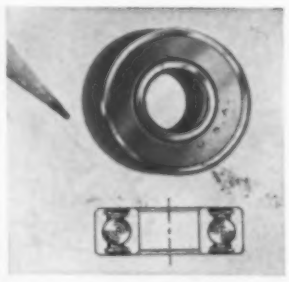
AMIDON FITTINGS

and standard pipe • pictures available

AMIDON ENGINEERING CO., Elyria 20, O.

▲ For more details circle NED-465 A4 on enclosed inquiry slip ▲

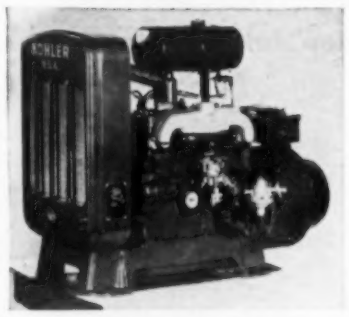
COMMERCIAL BEARING uses molded plastic seal



Low cost commercial bearing, identified as CS 3258, is being used in washing machines, farm equipment, small electric motors and other applications where speed and load are moderate. It has carburized and hardened raceways, ground surfaces and a molded plastic seal. Bearing is available in English or Metric sizes, with sizes ranging from ⅝ to 2.047-in. OD and bores from 3/16 to 1 in., with or without plastic seals and/or metallic shields. It is possible to get up to 75 per cent of the load rating of a comparable precision bearing at 10,000 rpm, depending upon materials specified. Made by **Schatz Mfg. Co.**, 6763 Fairview Ave., Poughkeepsie, N. Y.

▲ For more details circle NED-466 A4 on enclosed inquiry slip ▲

ELECTRIC PLANTS are kerosene-gasoline powered

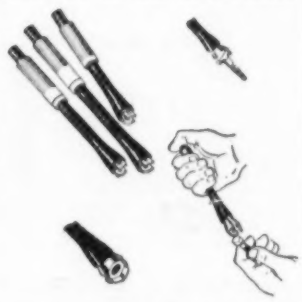


Lower operating costs on its 2 and 3.5 kw manually started electric plants are achieved by Kohler Company's use of kerosene-gasoline for the engine. Engine is started on gasoline from a 1¼-gallon tank and when normal operating speed and temperature are reached, a two-way valve is turned to transfer fuel supply to kerosene. Before engine is stopped, fuel is changed back to gasoline to clear fuel lines and carburetor for easy restart. Generator plants produce 115 v ac. Made by **Kohler Co.**, Dept. 2, Kohler, Wis.

▲ For more details circle NED-467 A4 on enclosed inquiry slip ▲

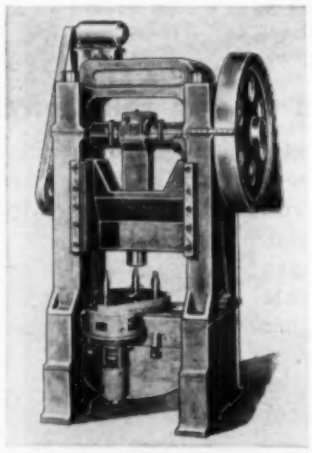
SOCKET WRENCH-SCREWDRIVER for use in hard-to-get-at places

Nuts, screws and bolts can be held, tightened or loosened in hard-to-get-at places where fingers can't hold them by the Tip Wrench. It is an adjustable combination socket wrench and screwdriver. Tool grips firmly and does not allow nut or bolt to slip or turn. Screwdriver blades, one in each jaw, engage the screw slot. Jaws slide out and open by thumb pressure on the plunger head. Three models have capacity range of No. 2 to 12 nut or screw. Made by **Smith Heat Treating Co.**, Tip Wrench Div., Dept. T-101, 5865 Wilmington Ave., Los Angeles 1, Calif.



▲ For more details circle NED-468 A4 on enclosed inquiry slip ▲

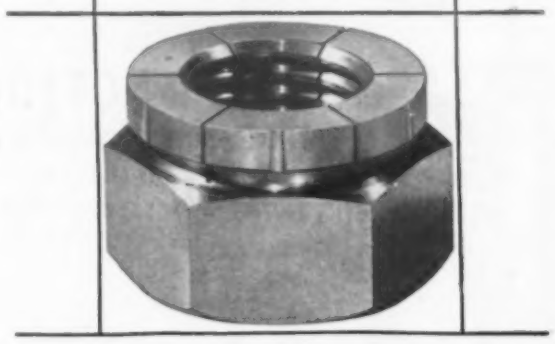
INDEX TABLES for stamping and forging presses



Automatic loaders for stamping and forging presses have motor-driven 120-degree index table which permits mounting die punch at dead center of ram position so that maximum stability is provided and large die blocks can be mounted. Units have a modified cycloidal cam and shot pin index mechanism and can be loaded and unloaded either manually or by auxiliary feeding devices. Unit illustrated is fitted on a crank press for coining bodies of steel and copper rifle grenades. It is manually loaded and has a 0.7-second index mechanism resulting in a production rate of 1200 pieces per hour. Press and loader are interlocked. Similar models are made in wide variety of sizes to fit most presses. Made by **Hautau Engineering Co.**, Dept. 1, 721 Wanda, Ferndale 20, Mich.

▲ For more details circle NED-469 A4 on enclosed inquiry slip ▲

they won't work loose



FLEXLOC Self-Locking Nuts lock and stay tight, no matter how severe the vibration. Yet they can be easily removed and reused repeatedly. They are stop nuts too; they stay put in any position on a bolt when the locking threads are fully engaged. And FLEXLOCS are one piece, all metal—nothing to assemble, come apart, lose or forget. See your local industrial distributor for literature and samples or write STANDARD PRESSED STEEL Co., Jenkintown 24, Pa.

FLEXLOC LOCKNUT DIVISION

SPS
JENKINTOWN PENNSYLVANIA

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Steel company saves time with a 10 hp Car Spotter.

Spot cars at a moment's notice with a LINK-BELT Car Spotter

ONE man and a Link-Belt Car Spotter can spot up to six loaded freight cars with ease. What's more, you reduce demurrage charges. Choose from a complete line of models—portable or stationary, with 5 or 10 hp integral or separate motors.

LINK-BELT CAR SPOTTERS

Write today for Book 2092 and get all facts on car spotters and drum type pullers.

LINK-BELT COMPANY: Plants: Chicago, Indianapolis, Philadelphia, Colmar, Pa., Atlanta, Houston, Minneapolis, San Francisco, Los Angeles, Seattle, Toronto, Springs (South Africa), Sydney (Australia). Sales Offices in Principal Cities. 13,160

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IF YOU USE SPECIALTY WIRE (or are planning to use it)

YOU SHOULD GET THIS NEW BOOKLET!

Here, in one 16-page pocket-size illustrated booklet, you get useful facts on:

- How to get consistent uniformity of wire on every order
- Help on matching wire to your job requirements
- Interesting product problems solved with wire
- Useful tables of tensile ranges and data on feet per pound of various wire diameters

Find out how you can solve your production or product performance problems with higher quality Webb CARBON AND STAINLESS NEEDLE WIRE . . . STAINLESS SPRING WIRE . . . HIGH CARBON WIRE . . . SPECIALTY STAINLESS WIRE. Use coupon below.

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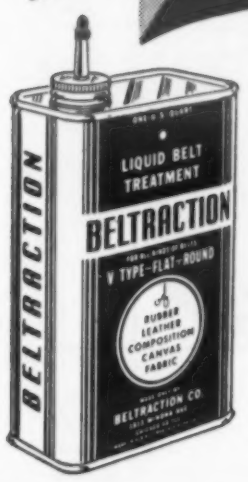
STOP BELT SLIPPAGE TROUBLES



WITH
BELTRACTION
THE *Liquid* BELT TREATMENT
CERTIFIED BY LEADING INDEPENDENT LABORATORIES and More Than 110,000 Users

Belt slippage can reduce machine efficiency as much as 70%. Prevent it with BELTRACTION! This *liquid* belt treatment by stopping slippage prevents chattering and misalignment of precision cutting tools—minimizes rejects and costly re-working. Write for interesting folder "Horse Power Where and When You Need It", which gives results of tests of BELTRACTION by United States Testing Company and other prominent independent laboratories.

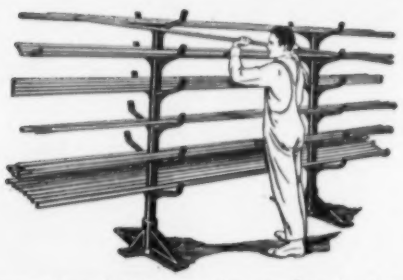
BELTRACTION weatherproofs, oilproofs and waterproofs all kinds of belts and prolongs belt life.

BELTRACTION COMPANY
1817 W. Winona St. Chicago 40, Ill.

FOR ALL TYPES OF BELTS • V-TYPE, FLAT OR ROUND

▲ For more details circle **NED-473 A4** on enclosed inquiry slip ▲

for EFFICIENT HANDLING and ORDERLY STORAGE



You save time, both in storing and in issuing, when you use Brown Sectional Racks. Open sides speed handling. Complete visibility permits quick selection to save waiting mechanics time.

Maximum flexibility in arrangement is possible because each Brown Rack is independent and self-contained, need not be bolted to floor. Easily relocated. Systemized storage with Brown Racks promotes good housekeeping, cleanliness.

All iron and steel construction, can't burn, bend, sag or warp. Never wear out.

Get these values now! Write for complete specifications and prices on wide range of models and sizes. Brown Engineering Co. 129 N. Third St., Reading, Pa.

BROWN QUICK-SERVE RACKS

▲ For more details circle **NED-474 A4** on enclosed inquiry slip ▲

▲ For more details circle **NED-475 A4** on enclosed inquiry slip ▲

CHUCK-TYPE TOOL HOLDER
for drills, reamers, counterbores

Perfect alignment of drills, reamers, counter bores and similar tools is quickly accomplished with these chuck-type floating holders which are made in two parts: the shank, which has integral flange; and similar flange on which chuck is mounted. The two parts are fastened together by two cap screws, threaded into shank flange. Screw holes in chuck flange are larger in diameter than screws, permitting the chuck-held cutting tool to be brought into perfect alignment with work. Du-Lite finish which assures rust resistance and long life will not chip, peel, crack or blister. Eight sizes are made ranging in price from $14.50 to $26.00, by **Barnaby Mfg. Co.,** 72 Knowlton St., Bridgeport 8, Conn.

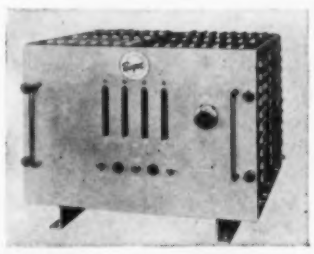
▲ For more details circle **NED-476 A4** on enclosed inquiry slip ▲

HONING MACHINE ATTACHMENT
makes operation fully automatic

Automatic timing and stroking attachment for converting manually operated honing machines into completely automatic units is available in standard form for practically all horizontal machines. Tests show that production of a single machine can be increased by ⅓ or that several machines can be run by one operator at the same time, depending on the work cycle. Attachment, which will also perform spherical honing, is also available in special versions to order. Available from **National Pioneer Co.,** Dept. D, 1134 Nebraska Ave., Toledo 7, O.

▲ For more details circle **NED-477 A4** on enclosed inquiry slip ▲

LIQUID LEVEL INDICATOR
uses ultrasonic pulse technique

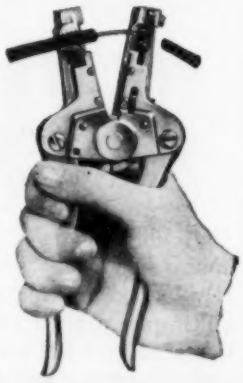


True liquid levels in various types of processing and storage tanks within ±0.01-ft can be indicated by the model SL-101 indicator system. It makes use of the ultrasonic pulse ranging technique to provide direct level reading in tens, units, tenths and hundredths of a foot on illuminated decimal counters. Automatic calibration system compensates for changes in velocity of sound propagation caused by varying temperatures, specific gravities and similar differences between liquids being gaged. One common indicator can gage any number of transducer equipped tanks within a radius of 2000 ft. Tank equipment is explosionproof. Made by **Bogue Electric Mfg. Co.,** Dept. CP, 52 Iowa Ave., Paterson 3, N. J.

▲ For more details circle **NED-478 A4** on enclosed inquiry slip ▲

WIRE STRIPPER
handles stranded or fine solid wire

All kinds of building and fixture wire, either stranded or fine solid can be stripped with a single squeeze of the handles of this Hi-Speed hand-type wire stripper. After wire is stripped, concealed cam holds jaws open until wire is removed. This prevents jaws from snapping back and crushing the wire. V-notches assure matching of stripping blades and prevent cutting or scoring of wire. Tool is made in seven sizes for Nos. 8 to 30 solid and stranded wires, as well as POSJ, parallel wire and 300-ohm flat twin lead-in wire. An adjustable stop is furnished with each tool. Made by **Holub Industries, Inc.,** 411 DeKalb Ave., Sycamore, Ill.



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Houdaille Automatic Co

AUTOMATIC • CONTINUOUS • Collects, Transports and Discharges Solid or Fibrous Materials—Metal Working Chips, Powders, Dust, Scale, etc.—Wet or Dry!

▲ For more details circle NED-480 A4 ▲

"This Bulletin May Hold the Answer to YOUR CONVEYING PROBLEMS"

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Pacific Coast Division, Mathews Conveyer Company West Coast . San Carlos, Calif.
Canadian Division, Mathews Conveyer Company, Ltd. . . . . Port Hope, Ont.

▲ For more details circle NED-481 A4 ▲

WORK·O·MATIC* GRAVITY
Mass-Position
MATERIAL AT WORK LEVEL

- **Giant 47.2 cu. ft. vertical storage hoppers feed *automatically* at work height.**
- **Fork truck operator fills hoppers *mechanically*, from any one of 8 directions, using Work-O-Matic drop-bottom box.**
- **Box stored under hopper increases storage to 67.4 cu. ft.—sufficient for full work periods in most operations.**
- **Eliminate need for in-process storage areas and costly re-handling, releasing fork trucks for other use.**

Work-O-Matic Gravity-Fed Hoppers can save time and speed production in your plant. For details write to The Union Metal Manufacturing Company, Canton 5, Ohio.

*Patent No. 2,445,038. Other patents pending.

UNION METAL Ma

▲ For more details circle NED-482 A4 ▲

tic Conveyors . . .

the LOW COST answer to your loose materials handling problems

Licensed under Hapman's Patents Nos. 2,147,199 and 2,432,756.

Write on company letterhead for 30-page catalog giving complete details on engineering features, capacities, typical applications and case histories of Houdaille Automatic Conveyors.

HONAN-CRANE CORP., 405 WABASH AVENUE, LEBANON, IND.
a subsidiary of
HOUDAILLE-HERSHEY CORP.

le NED-480 A4 on enclosed inquiry slip ▲

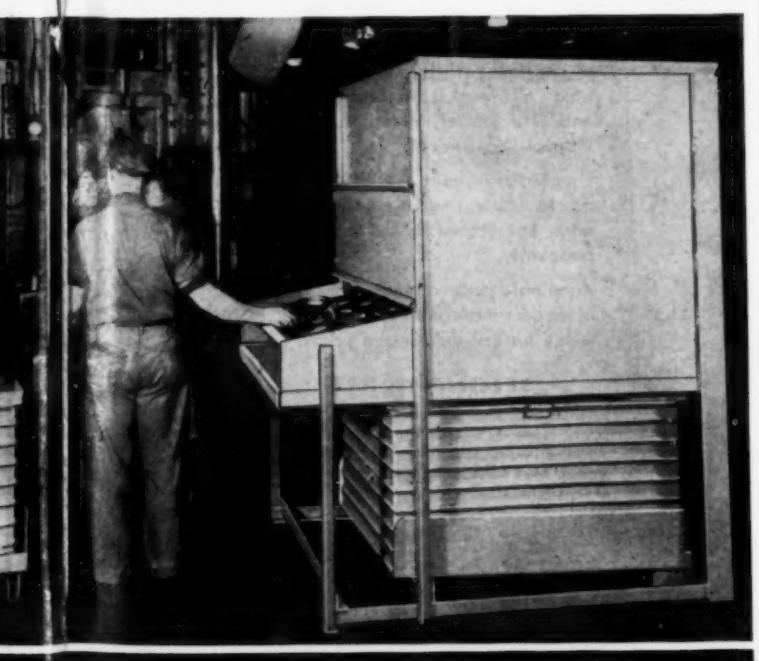
e Answer
OBLEMS"

IVEYERS
American and Canadian Cities
Ellwood City, Pennsylvania
oast . San Carlos, California
. . Port Hope, Ontario

● We could say . . . "Hot off the press! Come and get it." But, that's no way to present the solution to a conveying problem. We do say, however, that this bulletin, presenting the newest in Mathews General Purpose Belt Conveyers, could be just what you're looking for. It might help you solve a particular conveying problem. Write for it today.

le NED-481 A4 on enclosed inquiry slip ▲

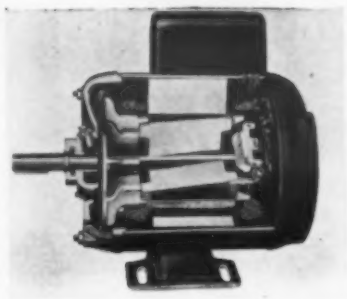
GRAVITY-FED HOPPERS



Material Handling Equipment

e NED-482 A4 on enclosed inquiry slip ▲

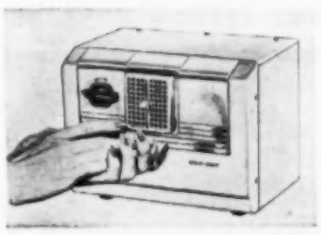
FRACTIONAL HORSEPOWER MOTORS
power increased in given frame size



Due to rerated design, Form F fractional horsepower motors produce more power for a given frame size than previous models, with identical standards of performance and dependability. They are available in split phase, single phase and capacitor start induction types and in squirrel-cage polyphase styles for light and heavy starting loads and general purpose use. Horsepower ranges are from 1/6 to 1 and frame sizes from 62 to 68. Made by **Century Electric Co.**, Gear Motor Div., 1812 Pine St., St. Louis 3, Mo.

▲ For more details circle **NED-483 A4** on enclosed inquiry slip ▲

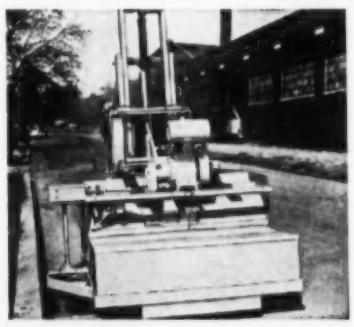
ELECTRIC HAND DRIER
has ozone lamp to destroy odors



An ozone-producing lamp that destroys unpleasant odors is feature incorporated in the Ozo-Dry electric hand drier. Unit is shipped with simple, two-bolt mounting bracket and plugs into any 110-v ac outlet. An automatic timer shuts off after one minute, preventing waste of electricity. Drier has white enamel finish with chrome trim and measures only 9½ x 7 x 6¾ in. Made by **Ozo Sales Corp.**, Dept. NED-1, P. O. Box 141, New Haven, Conn.

▲ For more details circle **NED-484 A4** on enclosed inquiry slip ▲

POWER SWEEPER
pushed by fork truck, tractor, jeep



Fork lift truck, motor truck, industrial or farm-type tractor, Jeep or any other vehicle can be used to push the Yard Bird power sweeper. Clamps attach or detach it in as little as 3 minutes without tools. Unit's broom is powered by a Wisconsin AEN air-cooled engine, and it sweeps a path 4 ft. wide. Equipment includes a 9-cu ft collection hopper and 25-gallon sprinkler system to control dust. A 20-in. gutter broom is optional. Mounting is on three rubber-tired swivel casters. Made by **Little Giant Products, Inc.**, Dept. NE, 1530 N. Adams St., Peoria 3, Ill.

▲ For more details circle **NED-485 A4** on enclosed inquiry slip ▲

THE RIGHT TOOL WHEN YOU WANT IT

This Continental Counterbore Set No. 1 contains a wide assortment of counterbores, countersinks and pilots arranged for quick selection. Its two holders feature Continental's Balanced Indestructible Drive, in which the tools are engaged or disengaged by a simple "twist of the wrist." One of Continental's three standard counterbore sets is sure to suit your needs. Order through your local Ex-Cell-O representative or write to Continental for complete information. Ask for Bulletin B47-37.

52-10

CTW

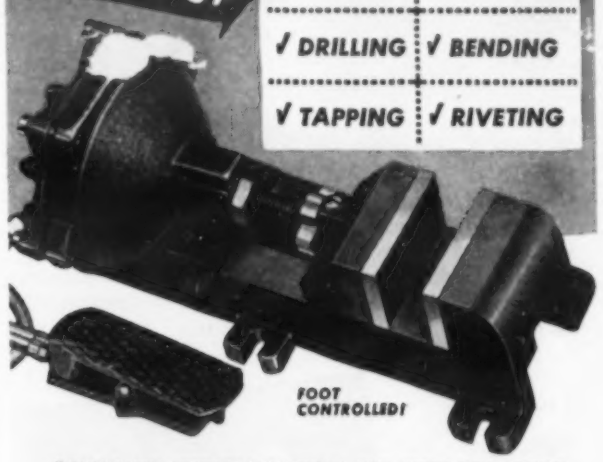
Continental Standard Counterbore Set No. 1 for counterboring, spot-facing and countersinking.

CONTINENTAL TOOL WORKS
DIVISION OF EX-CELL-O CORPORATION • DETROIT 32, MICH.

▲ For more details circle **NED-486 A4** on enclosed inquiry slip ▲

SPEEDY AIR VISE

SPEEDS UP
✓ MILLING ✓ PUNCHING
✓ DRILLING ✓ BENDING
✓ TAPPING ✓ RIVETING



FOOT CONTROLLED!

GRIPPING FORCE 15 TIMES AIR LINE PRESSURE

Speedy Air Vise helps you do dozens of operations faster, better, cheaper—by air pressure! Foot control valve opens and shuts vise instantly, leaving *both* hands free to produce *more!* Jaw opens up to 3 inches, holds castings, parts, jigs, etc. Compact and trouble-free.

Complete with Foot Control, Air Hose and *Fittings*.....only **$36.00**

Prompt Delivery from Your Supplier or Write Direct

W. R. BROWN CORPORATION • 2647 N. Normandy Ave. • Chicago 35, Ill.

AIR REGULATORS • AIR FILTERS • AIR GUNS • PORTABLE COMPRESSORS

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HANDLE CORROSIVES

● EASILY
● SAFELY
● with PLAXPAK® CARBOYS

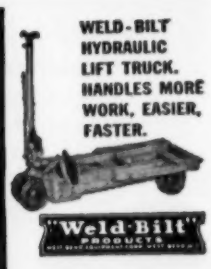
Replacement costs drop practically to zero. Expensive accidents due to carboy breakage are eliminated. Employees handle hazardous or expensive chemicals more efficiently. These and many other important advantages are gained with Plaxpak polyethylene carboys. Get the full story by writing for our brochure. Or ask to see a representative for complete details.

PLAX

PLAX CORPORATION
672 FARMINGTON AVENUE
WEST HARTFORD, CONN.
In Canada:
Plax Canada, Ltd., Toronto

▲ For more details circle **NED-488 A4** on enclosed inquiry slip ▲

Take an EXTRA Profit *with* **Weld-Bilt** *Experience in* Materials Handling!



WELD-BILT HYDRAULIC LIFT TRUCK. HANDLES MORE WORK, EASIER, FASTER.

"Weld-Bilt" PRODUCTS

One Midwest manufacturer saved $90,000 on equipment cost alone because he called in a Weld-Bilt engineer FIRST, before deciding on expensive special-design units recommended to solve a difficult handling problem. Our engineer, experienced in cost-saving shortcuts, showed how simple adaptation of more standard equipment could do the job even better.

This is the kind of service you can expect from WELD-BILT . . . a thorough analysis of your problems based on years of varied experience and wide knowledge, of handling problems . . . then a recommended solution that will do YOU the most good — in time and labor savings, in product protection, production speed-up — at the lowest cost. It may involve adapting standard equipment, custom-engineering new equipment — or merely realigning your present operations.

Call in the WELD-BILT Materials Handling Engineer for an economical solution to your problem today. You'll probably save money.

WEST BEND EQUIPMENT CORP.
311 Water St., West Bend, Wis.

MATERIALS HANDLING ENGINEERS

Portable Elevators • Pallet Trucks • Single Stroke Lift Trucks • Two-Wheel Trucks • Platform Trucks • Skid Platforms.

▲ For more details circle **NED-489 A4** on enclosed inquiry slip ▲

it would take 800 pictures like this...

to show all the types and sizes of 'Surface' industrial burners.

One of our own "sticklers for accuracy" challenged this statement. For his satisfaction, a relisting was made, which more than proved the point. Whatever the gas, capacity needs, or application requirements, the chances get better all the time that your burner requirements can be met by 'Surface' cataloged burners.

Write for bulletin 2-GE-8

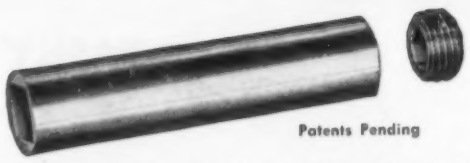
Surface
HEAT TREATING EQUIPMENT

SURFACE COMBUSTION CORPORATION, TOLEDO 1, OHIO

Also makers of JANITROL SPACE HEATING—KATHABAR HUMIDITY CONDITIONING

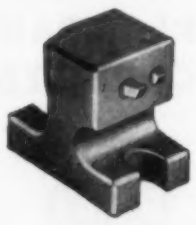
▲ For more details circle NED-490 A4 on enclosed inquiry slip ▲

How SQUARE HOLED SLEEVES SPEED UP TOOL-MAKING!



Patents Pending

One of the most difficult problems in toolmaking can be solved easily and quickly with Sturdy Square Holed Sleeves. The perfection of broached square holes can be had in boring bars, milling cutters and many other applications at a small fraction of the cost of imperfect hand-made square holes. The Sturdy Square Holed Sleeve consists of a round sleeve with a perfectly square hole broached through the center. This hole is tapped at one end to receive a back-up screw which is furnished with the Sleeve. The Sleeve can be sweated or pressed into a drilled and reamed hole to make a perfectly square accurate hole in a very few minutes.



The Sturdy Square Holed Sleeve will save you many hours and many dollars in the making of boring bars, tool holders and other tools requiring square holes.

SLEEVES MADE IN FOLLOWING SIZES:
3/16, 1/4, 5/16, 3/8, 7/16, 1/2, 5/8, 3/4, 1"

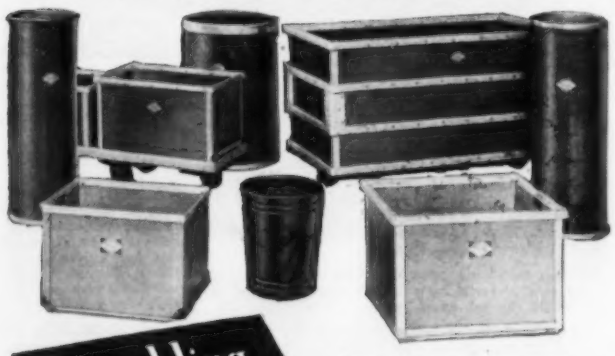
Write for Literature

STURDY BROACHING SERVICE
23514 TELEGRAPH RD., DETROIT 19, MICH.

▲ For more details circle NED-491 A4 on enclosed inquiry slip ▲

SEND FOR FREE CATALOG ON SPAULDING FIBRE RECEPTACLES

A complete line of tough, lightweight, shock-proof containers for storage and materials handling. Resistant to moisture, impact and abrasion. Won't splinter or corrode.



Spaulding

Boxes, barrels, trays, trucks in all sizes and weights.

SPAULDING FIBRE CO., INC., DOVER, N. H.

Please send me by return mail your catalog on Spaulding's complete line of Fibre receptacles.

Name _____

Firm _____

Address _____

City _____ Zone _____ State _____

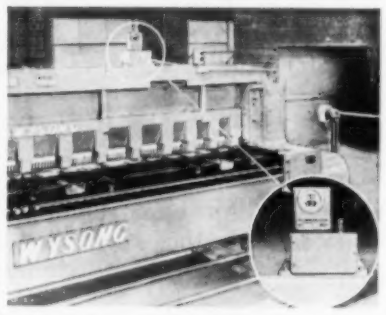
▲ For more details circle NED-492 A4 on enclosed inquiry slip ▲

HIGH SPEED TELEPRINTER
capable of speeds to 150 wpm

Compact teleprinter was originally designed for the armed services, weighs 45 lb, will send and receive messages at 100 wpm and has a top capacity of 150 wpm. Two standard models are available. Model 150 is essentially the army unit converted for commercial use, and model 155 is a further streamlined version providing all features necessary for commercial purposes. Unit provides a system of electronic communication whereby printed messages can be transmitted simultaneously to any number of similar machines, on either wire or radio circuits. Made by **Kleinschmidt, Inc.**, Dept. KI, Deerfield, Ill.

▲ For more details circle NED-493 A4 on enclosed inquiry slip ▲

STOP GAGE INDICATOR
shows exact shear setting



Mounted on power squaring shears, stop gage indicator permits operator to check exact setting of power-operated back gage from front of the machine. It is mechanically connected to back gage mechanism and registers desired setting from shear blade. Fractional dial reads in 64ths or 100ths of an inch, and is equipped with a magnifying lens so that it can be easily read. Number wheels give full inch readings. Indicator is also adaptable to other machines. Made by **Durant Mfg. Co.**, 1922 N. Buffum St., Milwaukee 1, Wis.

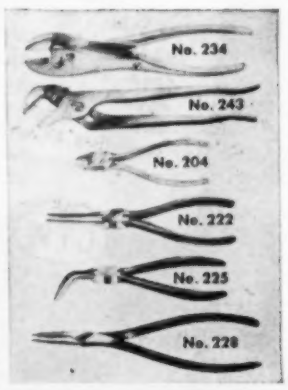
▲ For more details circle NED-494 A4 on enclosed inquiry slip ▲

VACUUM CLEANER
high capacity wet or dry pickup unit

Large quantities of dirt, chips, liquids and cutting oils can be picked up at a high rate of speed by the model 500-55 industrial vacuum cleaner. Water can be picked up at the rate of 40 gpm. Lid of the cleaner fits any 55-gallon drum, permitting rapid shifting from one drum to another. Tank is equipped with dump valve and dolly has Neoprene rubber casters capable of moving heavy loads. When used for dry pick-up, the tank and large filter bag allow use for long periods without emptying. Motor unit is removable for use as blower or portable vacuum cleaner. Made by **American Cleaning Equipment Corp.**, 2037 S. Halsted St., Chicago 8, Ill.

▲ For more details circle NED-495 A4 on enclosed inquiry slip ▲

PLIERS
new types added to line



Six pliers have been added to Proto line. Compound leverage model 234 gives a ten times multiplication of pressure at the jaw by using a three-piece design. It opens to 1¼ in. and is 8-in. long. Multiple-groove joint model 243 has five curved grooves engaged by a tongue to prevent slippage and take strain off the bolt. No. 204 is a diagonal cutting 4½-in. midget electrical cutting plier with induction hardened cutting edges. Needle nose models are 222, 225 and 228. They have lengths ranging from 6½ to 8 in. and various nose angles and sizes. Made by **Plomb Tool Co.**, Dept. D, 2209 Santa Fe Ave., Los Angeles 54, Calif.

▲ For more details circle NED-496 A4 on enclosed inquiry slip ▲

JOHNSON BAND SAWS

SPECIFICATIONS—MODEL B

Capacity—5" rounds, 10" flats.
Height Overall—(Closed)—32".
Blade Length—7'5" x ½" x 23 ga.
Floor Space—46" x 28".
Weight—(Uncrated) 235 lbs. Crated 280 lbs. Boxed for Export 400 lbs.
Wheel Diameters—10"
Motor—½ H.P. any voltage available.
Speeds—45, 90 and 150 ft. per min.
Casters—Optional at slight extra cost.

MODEL J, 10" X 18" CAPACITY ALSO AVAILABLE
WRITE FOR DETAILS

JOHNSON MANUFACTURING CORP.
ALBION, MICHIGAN

▲ For more details circle NED-497 A4 on enclosed inquiry slip ▲

MARK-TIME "2000" Bell Timer

a favorite for dependability & economy!

Hundreds of the country's leading manufacturers of ranges, washing machines and similar appliances have standardized on "2000"... because no other bell timer gives such rugged dependability at so little cost!

"2000" is perfect for any device or appliance where a clear, resonant bell signal is required at the end of a pre-set, measured time interval.

Durability is built into "2000"... its simple, trouble-proof operation has earned its outstanding popularity.

Available with a wide variety of modern dials and knobs. Write today for full details and prices.

SPECIFICATIONS

Standard timing ranges from 60 seconds to 5 hours. Normally supplied with center stud mounting. Other mountings available on request. May be supplied with winding shafts of various types.

Manufactured and sold in Canada by SPERRY GYROSCOPE OTTAWA, Limited 3 Hamilton St., Ottawa, Ontario, Canada

MARK-TIME

M. H. RHODES, INC.
HARTFORD, CONNECTICUT

▲ For more details circle NED-498 A4 on enclosed inquiry slip ▲

FLEXIBLE AS STRING . . . GLASS-CLEAR . . . FEATHER-LIGHT . . . FULLY RESISTANT TO ACIDS, ALKALIES, OILS, GREASES, AND WATERS . . . MIRROR-SMOOTH . . . TOUGH AS LEATHER . . . NON-OXIDIZING . . . NON-TOXIC . . . LONG-WEARING . . . FOR THE TRANSMISSION OF LIQUIDS, GASES, AND SEMI-SOLIDS.

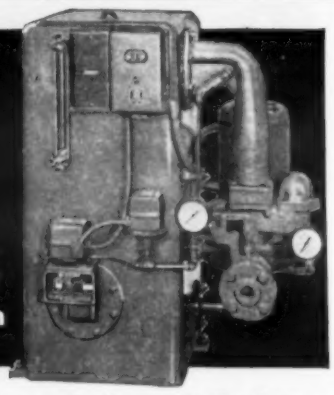
TYGON Tubing is available in six standard compounds — continuous lengths — bores up to 2" ID — with or without outer braid reinforcement. Special compounds and sizes made to order.

Write, today, for detailed information and technical Bulletin T-77! 202C

U. S. STONEWARE
AKRON 9, OHIO
PLASTICS AND SYNTHETICS DIVISION

▲ For more details circle **NED-499 A4** on enclosed inquiry slip ▲

DUNHAM VACUUM PUMPS
money savers in any boiler room



If there's any steam up in your boiler at all, Dunham Vacuum Pumps will get it around . . . fast enough to lower fuel bills.

Fast Steam Circulation? Yes. Pump pulls up to 26" of vacuum at no greater amp. load than when pulling 5".

Staying Power? You bet. *No close clearance parts* . . . only one principal moving part. You can virtually write off expensive repairs.

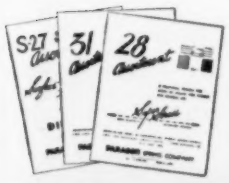
Installation Costs? Reduced . . . since return line connections are at such a low level (only 9⅛"). No need for expensive pitting. Single motor easily handles *both* air and condensate removal. For full information, write for BULLETIN NED-1.

DUNHAM HEATING SYSTEMS AND EQUIPMENT
Quality First for Fifty Years

C. A. DUNHAM COMPANY, 400 W. Madison St., Chicago 6, Illinois
▲ For more details circle **NED-500 A4** on enclosed inquiry slip ▲

QUALITY CONSCIOUS SPRING BUYERS CHOOSE
PARAGON SPRINGS

Springs from Paragon are good springs . . . because of our complete control during manufacture. Our customers know that even commercial springs are better from Paragon . . . at no extra cost. Whatever your requirements . . . Precision or Commercial . . . your orders and inquiries receive expert individual attention.



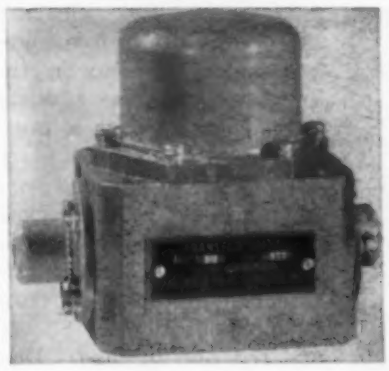
SEND SPECS FOR QUOTATION

Write for STOCK SPRING DATA SHEETS giving complete specs, loading and design information.

PARAGON SPRING COMPANY
4619 W. Fulton St. • Chicago 44, Ill.

▲ For more details circle **NED-501 A4** on enclosed inquiry slip ▲

SERVO VALVE
has high speed of response



Any maximum desired output flow from 0.5 to 8.0 gpm in 1000 to 3000 psi hydraulic systems can be controlled by the model 500 electro-hydraulic servo valve. Standard signal input for full output flow is a differential current of ±8.0 milliamperes, with lower or higher signal levels also available. Use is in control systems requiring high accuracy or high speed of response. Valve body is aluminum alloy and bushing and spool assembly are hardened steel. Size is 2 7/16 in. high by 3 1/16 in. wide by 1¾ in. deep. Made by **Moog Valve Co.**, Proner Airport, East Aurora, N. Y.

▲ For more details circle **NED-502 A4** on enclosed inquiry slip ▲

SELENIUM RECTIFIERS
have single knob controls

Self-contained selenium rectifiers provide direct current power for electroplating and other uses and feature single knob controls, which eliminate the possibility of single phasing. Control permits voltage and current changes in fine increments with no interruption from 0 to 12 v dc. Units also have class B insulated transformers, forced draft cooling, electromagnetic starter, automatic overload protection and full metering. Made by **Rapid Electric Co.**, 2834 Middletown Rd., New York 61, N. Y.

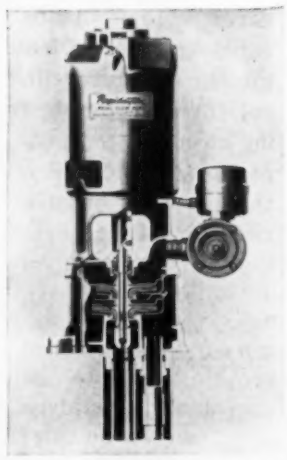
▲ For more details circle **NED-503 A4** on enclosed inquiry slip ▲

THROUGH-PASS CAPACITORS
for suppressing rf interference

Originally developed for 115/250-v ac lines in mobile military power units, 50-amp Thru-Pass capacitors are now available for general use. Shell of units is threaded for mounting in a flatted circular hole in a chassis or bulkhead wall, and they will not loosen or rotate under vibration. Glass-to-metal solder seal terminals protect against atmospheric conditions from −55 to 85° C. Made by **Sprague Electric Co.**, 183 Marshall St., North Adams, Mass.

▲ For more details circle **NED-504 A4** on enclosed inquiry slip ▲

AXIAL FLOW JET PUMP
for settings of 60 to 140 ft



Two-stage axial flow construction and a ¾-hp motor are combined in this Rapidayton Two-Stager jet pump for high capacities and pressures in settings of 60 to 140 ft in 4-in. well. Internal parts are brass or stainless steel, and diffusers, cases and covers are precision formed. Cartridge-type rotary seal can be replaced easily without special tools and without disconnecting pipe lines or disassembling pump. Combination adapter flange and slip coupling eliminates need for separate coupling. Valve automatically adjusts to varying well depths and discharge pressures. Made by **Dayton Pump & Mfg. Co.**, Dept. NED, 500 N. Webster St., Dayton 1, O.

▲ For more details circle **NED-505 A4** on enclosed inquiry slip ▲

The Original...

Fafnir Wide Inner Ring Bearing with Self-Locking Collar and Mechani-Seals

A Time-Tested and Proven Feature of Fafnir Ball Bearing Power Transmission Units

Counterbored, eccentric cam, mated construction of collar and inner ring assures positive locking action without set screws, lock nuts or adapters

FAFNIR BALL BEARINGS
Most Complete Line in America

THE FAFNIR BEARING COMPANY, NEW BRITAIN, CONN.

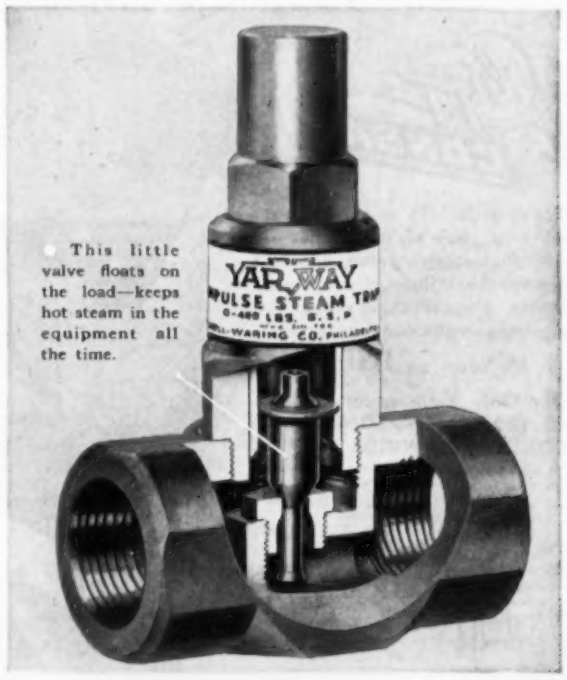
▲ For more details circle **NED-506 A4** on enclosed inquiry slip ▲

THIS LITTLE VALVE CAN SAVE YOU MONEY

Your steam-heated equipment can turn out more production because of this little stainless steel valve.

It is the only moving part in a Yarway Impulse Steam Trap, and *it floats on the condensate load.* When steam is turned on, the little valve opens wide . . . discharges condensate and air *continuously* and brings the equipment *to production temperature in the shortest possible time.* After that, it passes, with a pulsating action, all condensate as it forms—*keeps a maximum, steady temperature in the equipment.*

Result to you—more production per day.



This little valve floats on the load—keeps hot steam in the equipment all the time.

Other Yarway Impulse Steam Trap advantages—small size, low initial cost, easy installation, low maintenance, stainless steel construction, and quick availability from over 200 local industrial distributors.

Over 900,000 Yarways have been sold to nearly all industries. Write for free Yarway Trap Book T-1740.

YARNALL-WARING COMPANY
131 Mermaid Ave., Philadelphia 18, Pa.

YARWAY impulse steam trap

▲ For more details circle **NED-507 A4** on enclosed inquiry slip ▲

Mark your own symbols, numbers, lettering, on your small parts, tools, identification and name plates . . . easily, simply, quickly . . . tracing from a master with the GREEN ENGRAVER.

Widely used in electronic and plastic fields, in machine tool shops and wherever permanent marking is needed. The GREEN ENGRAVER engraves equally well on metals, plastic, wood, hard rubber and glass.

Fact-filled folder on request . . . showing how economies in costs, labor and time are achieved with the GREEN ENGRAVER.

Routs Models
Profiles Engraves

Etching attachment and other special equipment for industrial uses are available.

Green Instrument Co.
INCORPORATED
375 PUTNAM AVE., CAMBRIDGE, MASS.

▲ For more details circle NED-508 A4 on enclosed inquiry slip ▲

REPAIR CONCRETE PLANT FLOORS by SAWING BEFORE BREAKING

. . . with a Clipper CONSAW

Save up to 50% in labor and material. Saw repair patches—saw gas, water, conduit, and air line trenches in floors, runways and streets. Stops cracking and spalling—stops high maintenance costs.

. . . It's Yours on FREE TRIAL

Our Only Business for Nearly 20 YEARS . . . MASONRY and CONCRETE SAWING!

The unqualified Clipper guarantee of satisfaction is backed by world-wide experience, the ability to select the finest materials and the "know-how" to put them together

. . . by the MASONRY SAW Originators

Every shape and size refractory cut in seconds! Perfect fitting reline jobs that last longer—cost less. A Clipper Model to fit any job—any budget. SOLD ON FREE TRIAL

MODEL HD 15 MODELS PRICED FROM $265

SAME DAY SERVICE FROM YOUR NEAREST FACTORY BRANCH —SEE BELOW

Mr. Clipper

CLIPPER SUPERIOR DIAMOND BLADES

. . . guaranteed to . . . "Consistently Provide the fastest cut . . . at the lowest cost . . . with the greatest ease!" Clipper alone can supply every necessary metal bond . . . in over 36 specifications.

Clipper MANUFACTURING CO.
NATION-WIDE DIRECT FACTORY SERVICE

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• BOSTON • DETROIT
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• CHARLOTTE, N. C. • NEW YORK
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CLIPPER MFG. CO. Suite 401
2800 S. WARWICK • KANSAS CITY 8, MO.

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☐ CLIPPER CONSAWS ☐ CONSAW DEMONSTRATION
☐ CLIPPER MASONRY SAWS ☐ CLIPPER DIAMOND BLADES

COMPANY _____
ADDRESS _____
CITY _____ STATE _____

▲ For more details circle NED-509 A4 on enclosed inquiry slip ▲

LENS CLEANING STATION
fluid dispensed from pressurized can

Heavy-duty lens cleaning station for use in foundries, welding departments or other heavy-grit areas consists of cleaning fluid in a pressurized can and a dispenser for feeding interfolded wiping sheets. Can is locked to the steel body of the dispenser and contains sufficient fluid for more than 1000 applications. Sheets are fed one by one. Dispenser also contains ample space for waste tissue. Made by **Silicone Paper Co. of America**, Dept. A, 230 Park Ave., New York 17, N. Y.

▲ For more details circle NED-510 A4 on enclosed inquiry slip ▲

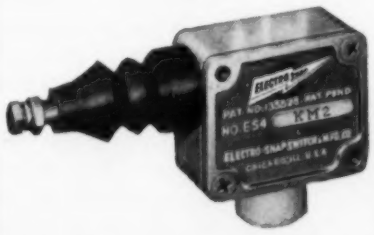
ELECTRONIC TELEPHONE
requires no acoustical booth

Noise-free communication can be carried on in noisy plant areas without aid of acoustical booths or similar enclosures with this Gai-Phone electronic telephone. Unit is similar in appearance and operation to conventional telephones and can be mixed with them in the same system. Close-talking dynamic transmitter in handset provides high discrimination against surrounding noise in addition to high quality voice transmission. Clear reception is assured under same conditions. Control of receiver and transmitter volume level allows unit's use as terminal repeater station on long lines. Another feature is controlled automatic elimination of side-tone. Made by **Gai-Tronics Corp.**, Dept. P, Reading, Pa.

▲ For more details circle NED-511 A4 on enclosed inquiry slip ▲

ONE-WAY IMPULSE SWITCH
has choice of five "on" periods

One-way impulse action is featured in the model ES4-KM2 snap-action switch. Typical application would be in a switching operation where a pulse to a solenoid or starter is needed. Switch sends the controlling electrical impulse and then drops completely out of the circuit. Choice of five "on" periods, from 1/16 to ⅜-in. is offered.



Actuator plunger is sealed by a Neoprene boot to keep out water, oil and dust. Boot remains flexible between −67 and 160° F. Silicone boots are available for extreme temperatures. Basic switch is single-pole, double-throw type for alternating current circuits. Made by **Electro-Snap Switch & Mfg. Co.**, 4232 W. Lake St., Chicago 24, Ill.

▲ For more details circle NED-512 A4 on enclosed inquiry slip ▲

TUBE CLAMPS
for racks and other structures

Friction-type Tube-Strut clamps permit rapid erection of any tubular structure without threading or welding or special tools and parts. Any number of tubes can be joined at right or oblique angles as desired. Racks can be tailored to meet any requirement, and when disassembled, provide complete salvageability of materials. Shelving heights and rack sizes can be quickly altered and adjusted. Clamps are available in malleable steel and aluminum for ½, 1 and 1½-in. pipe. They have gripping strength on 1-in. pipe of 2½ tons. Made by **Tubular Structures Corp. of America**, 2960-D Marsh St., Los Angeles 39, Calif.

▲ For more details circle NED-513 A4 on enclosed inquiry slip ▲

LIGHTWEIGHT, COMFORTABLE, THRIFTY!

These economical, lightweight (1½ oz.) AO dust respirators are simply designed, easy to breathe in, offer unobstructed visibility, are easily cleaned. They are the lowest priced respirators approved by the Bureau of Mines! The R9100 protects against pneumoconiosis-producing and nuisance dusts — borax, carbon, glass, grain, graphite, cement, limestone, gypsum, coke, etc. Companion model R9100T protects against toxic dusts not considerably more toxic than lead — arsenate of lead, cadmium, manganese, DDT. Your nearest AO Safety Products Representative can supply you.

American Optical
SAFETY PRODUCTS DIVISION

SOUTHBRIDGE, MASSACHUSETTS • BRANCHES IN PRINCIPAL CITIES

▲ For more details circle NED-514 A4 on enclosed inquiry slip ▲

LAWLOR MOP WRINGERS

FOR EASIER MOPPING GET A LAWLOR NO. 2

Copied but never Duplicated!

EASIEST turning wringer made: there are bearings at ends of rollers.

EASY to bring rolls together: foot lever is perfectly balanced.

EASY to move wringer: self-adjusting front casters raise metal feet from floor when you're ready to go.

The LAWLOR No. 2 accommodates any standard round, galvanized pail up to 16-quart capacity. Net weight of wringer—23 pounds.

LAWLOR No. 6 TWIN is like the No. 2 Wringer in general construction, but accommodates two pails.

Write for Catalog of Mop Wringers, Tanks, Cleaning Equipment for every kind and size floor.

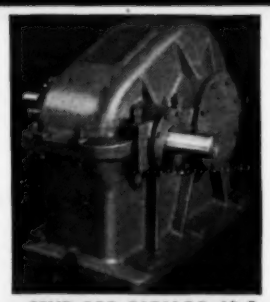
S. C. LAWLOR CO.
Quality Floor Equipment for 50 Years
131 N. ABERDEEN ST. CHICAGO 7, ILL.

▲ For more details circle NED-515 A4 on enclosed inquiry slip ▲

D. O. James
Established 1888

Continuous-tooth
HERRINGBONE GEAR SPEED REDUCERS
The Gear With the Backbone

The operating efficiency and dependability of these reducers is continuous testimony to their design and inbuilt qualities of manufacture. They are made in single, double and triple reductions — come in many sizes and in a wide ratio and horsepower range.



SEND FOR CATALOG 40-C

D. O. JAMES GEAR MANUFACTURING CO.
1140 WEST MONROE STREET • CHICAGO 7, ILLINOIS

▲ For more details circle NED-516 A4 on enclosed inquiry slip ▲

provides control for machine tools

This compact lightweight potentiometer provides accurate electronic control for cutting tool, winder, processing machine drives, and similar applications.

The precision metal alloy contact fully traverses the special resistance element with ½" plunger movement. Oil-tight enclosure, permanent calibration, 10,000 ohms resistance value on standard, up to 25,000 ohms on custom-made potentiometers. Write for Bulletin 68, Ward Leonard Electric Company, 51 South St., Mount Vernon, N. Y.

WARD LEONARD ELECTRIC CO.
Result-Engineered Controls Since 1892
RESISTORS • RELAYS • MOTOR CONTROLS • CHROMASTER

▲ For more details circle **NED-517 A4** on enclosed inquiry slip ▲

New Bostitch Stapling Plier with a Pointed Blade

For fastening almost any cardboard or corrugated container including those half-filled or loosely packed.

- Sharp blade penetrates easily and
- Clinches staples inside carton
- Leaves only small slit
- Seals and strengthens container

FASTEN IT BETTER AND FASTER WITH

BOSTITCH®
STAPLERS AND STAPLES

For a free demonstration call your local Bostitch representative. He's listed under "Bostitch" in your telephone directory. Or write:
Bostitch
681 Mechanic St.
Westerly, R. I.

▲ For more details circle **NED-518 A4** on enclosed inquiry slip ▲

● You can obtain custom-cut felt parts from American, ready for assembly. Gaskets, washers, seals, wicks, discs — any shape you need, with tolerances to meet your specifications.

QUICK DELIVERY — American operates four strategically-located cutting shops at: Glenville, Conn., Detroit, Mich., Los Angeles and San Francisco, Calif. These deliver promptly.

QUALITY — American produces felt to exact specifications, uniform in density, blend, thickness, strength. We will cooperate with you in designing felt parts and specifying the right felt for commercial or government applications.

QUOTATIONS — Write to above address.

American Felt Company
TRADE MARK

GENERAL OFFICES:
62 GLENVILLE ROAD,
GLENVILLE, CONN.

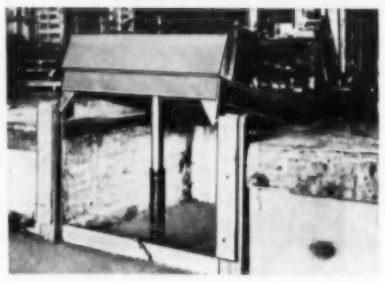
▲ For more details circle **NED-519 A4** on enclosed inquiry slip ▲

FLOW RATE REGULATOR for light slurries is self-contained

Despite fluctuations in either inlet or outlet pressure, self-contained type SA regulator will accurately regulate flow of light slurries, many suspensions, hot tar solution and similar materials. Down-flow design provides self-cleaning characteristics, prevents clogging and blocking by solids and provides for complete drainage. Units are available in steel casing with stainless trim and valves, or No. 316 stainless throughout. Capacities range from 2 to 10 gpm for model 1-SA to 100 to 550 gpm for model 7-SA. Made by **W. A. Kates Co.,** 432 Waukegan Rd., Deerfield, Ill.

▲ For more details circle **NED-520 A4** on enclosed inquiry slip ▲

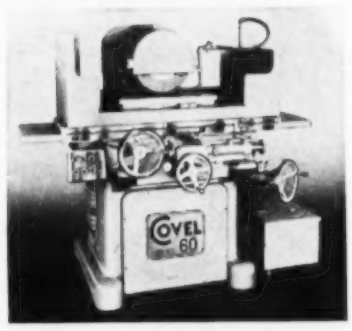
HYDRAULIC LOADING RAMP has 24 in. total movement



Hydraulically operated loading ramp can be raised or lowered to suit varying truck tailgate heights to any point from 12 in. below to 12 in. above dock height, increasing safety, convenience and speed of loading operations. It is available in 7 and 8-ft lengths and in widths from 5 to 8 ft in 5 and 10-ton capacity models. Controlling hand lever can be situated at any desired point. Hydraulic system has sufficient capacity to operate up to 14 units. Ramps are fitted with a bridge plate which locks in vertical position when not in use. Made by **CEMCO Industries, Inc.,** Galion, O.

▲ For more details circle **NED-521 A4** on enclosed inquiry slip ▲

SURFACE GRINDER has 14 x 24-in. work surface

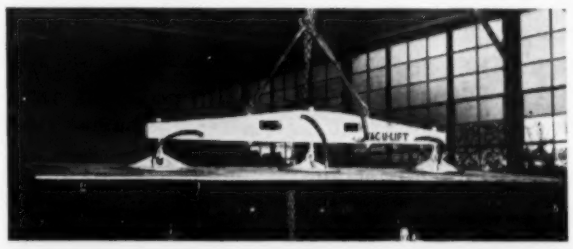


Features of toolroom and production model surface grinder include a 15-in. width cross feed, 27-in. table travel, vertical work capacity in excess of 18 in., 14 x 24-in. work surface and table speed of 10 to 90 fpm. Applications include grinding of trim and mold dies, plastic molding and forming dies, and form and cut-off tools. Also incorporated are elevating handwheel below table level, built-in wheel truing device, closed hydraulic circuit, dust protection, powered elevation and automatic lubrication. Made by **Covel Mfg. Co.,** Dept. 621, Benton Harbor, Mich.

▲ For more details circle **NED-522 A4** on enclosed inquiry slip ▲

VACUUM HOIST for flat surfaced steel, wood, etc.

Flat-surfaced articles of steel, aluminum, plywood or other material can be quickly removed from a stack, floor or machine with the Vac-U-Lift hoist. It at-



taches itself to the object to be moved with no manpower other than crane operator required. Each Vac-U-Pad will lift 1 ton; unit shown will lift a total of 3 tons. Power is furnished by a small rotary vacuum pump. A mechanical safety feature is available. It is applicable to any form of hoist and can be adapted to fork truck for mobile use. Unit are engineered to customer requirements. Made by **Blakeslee Mfg. Co.,** Yards Rd., Salem, Ill.

▲ For more details circle **NED-523 A4** on enclosed inquiry slip ▲

SHENANGO Centrifugal CASTINGS ... KEY TO SAVINGS

It pays to know the facts
SEND FOR THIS BULLETIN

use SHENANGO BAR STOCK for superior quality parts!

SHENANGO Meehanite Metal bars have exceptionally fine grain, higher tensile strength, finer, more uniform graphite dispersion. So naturally you can count on superior wear-life, and less chance of breakage or distortion in service.

Learn more about the money-saving qualities that make Shenango solid and tubular bar stock a preferred material for bearings, bushings, pump parts, liners, sleeves, gears, dies, gauges, and many other common and special parts. Send for the new Shenango Bar Stock Bulletin No. 152, containing additional information and a list of standard, conveniently stocked sizes.

SHENANGO-PENN MOLD COMPANY
Centrifugal Castings Division
Dover, Ohio
Executive Offices: Pittsburgh, Pa.

SHENANGO
ALL RED BRONZES • MANGANESE BRONZES • ALUMINUM BRONZES
MONEL METAL • NI-RESIST • MEEHANITE® METAL

▲ For more details circle **NED-524 A4** on enclosed inquiry slip ▲

For Easiest Pipe Threading ...it's a "504" RIDGID

1 Set of Dies Threads 1" to 2" Pipe

- Instant change to 1", 1¼", 1½" or 2" pipe regardless of position of quick-opening lever.
- Wide open easy-to-read size bar . . . adjustable to over and undersize threads.
- Quick-opening lever retracts dies instantly without stopping power drive—no slow backing off.
- 4-jaw workholder centers pipe for accurate threading—no lead screw to jam.

For unmatched, easy, fast, clean threading with your power drive, buy precision-made RIDGID 504 at your Supply House.

THE RIDGE TOOL COMPANY • ELYRIA, OHIO

RIDGID
Work-Saver Pipe Tools

▲ For more details circle **NED-525 A4** on enclosed inquiry slip ▲

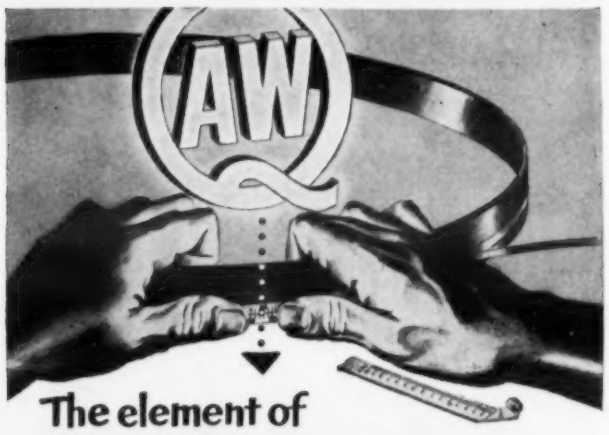
There is no one stock answer to every power transmission control problem. That is why ROCKFORD clutch engineers can be of practical help in designing applications that will increase your product's efficiency — make substantial savings in cost — and reduce servicing down-time. Send a print or a description of your clutch need for their recommendations — based on many years of clutch application experience and the extensive ROCKFORD line of clutches, power take-offs and speed reducers.

Send for This Handy Bulletin
Shows typical installations of ROCKFORD CLUTCHES and POWER TAKE-OFFS. Contains diagrams of unique applications. Furnishes capacity tables, dimensions and complete specifications.

ROCKFORD CLUTCH DIVISION
Borg-Warner
812 Catherine St., Rockford, Illinois

ROCKFORD CLUTCHES

▲ For more details circle NED-526 A4 on enclosed inquiry slip ▲



The element of
PRIDE IN CRAFTSMANSHIP

Pride plays a big part in how well a man does his job. At American Welding, AWQ symbolizes American Welding Quality.

It is this pride in one's job that enables American Welding to produce welded components with the same care that you would use in your own plant. So, if your problem can be solved by welding — either fusion or resistance — of any type of material — or a component or part that can be joined by welding — call your local Amweld representative or write us.

THE AMERICAN WELDING & MANUFACTURING CO.
170 DIETZ ROAD • WARREN, OHIO

▲ For more details circle NED-527 A4 on enclosed inquiry slip ▲

FREE SAMPLE

- Makes and keeps belts soft and pliable
- *Pliable* belt "clings" to "surface" of pulley
- Dissolves hard "glaze" that makes belts slip
- *Only* belt preservative that has met and passed U. S. Government Tests and Requirements
- Sold with money-back guarantee since 1896

Cling-Surface Company, Inc.
1045 Niagara Street • Buffalo, New York
Please send me FREE sample can of Cling-Surface "50" Belt Preservative
Name.....
Title.....
Company.....
City.....State.....

▲ For more details circle NED-528 A4 on enclosed inquiry slip ▲

TRANSPARENT ENVELOPES
reinforced for wall display use

Nine sizes from 5 x 7 in. to 18 x 24 in. are available in line of transparent Ful-Vu plastic envelopes or protector sheets which are reinforced at top and bottom with metal edges. They are open on one side only. Punched brass tab can be bent upward for hanging or allowed to lie flat if not needed. Certificates, licenses, instruction sheets and similar display material can be placed in them. Made by **Cooks' Inc.**, Dept. ND, Camden 1, N. J.

▲ For more details circle NED-529 A4 on enclosed inquiry slip ▲

LAPPING MACHINE
designed for bench mounting

Allen Figure 8 Lapp is a 150-lb bench type lapping machine which utilizes the "figure 8" lapping motion. It operates at four surface speeds from 250 to 1000 ipm. A 1/3-hp driving motor is connected to the mechanism by a V-belt and step pulleys. Serrated or smooth cast iron lap plates measuring 8 x 12 in. are interchangeable. Plates of other materials can be supplied. Brackets in base permit addition of hold-down devices for multiple piece lapping or for lapping of angled surfaces. Surface tolerances of less than 0.000012-in. are obtainable on most materials. Made by Rhinevault Machine Co. and distributed by **Lopon, Inc.**, Dept. ED, 1649 Sherwin Ave., Chicago 26, Ill.

▲ For more details circle NED-530 A4 on enclosed inquiry slip ▲

AIR COMPRESSOR
portable unit sprays paints

Compact Portoair portable air compressor is designed for medium size jobs calling for spraying of lacquer, synthetic enamels or ordinary paints. It is mounted on a dolly for easy handling. Unit includes a ¼-hp capacitor type 115-v motor, controls and 7-gallon welded steel tank. Made by **Pariser Machinery Corp.**, 165-7 Centre St., New York 13, N. Y.

▲ For more details circle NED-531 A4 on enclosed inquiry slip ▲

MINIATURE DC POWER PACKS
for transistor and standard use

Miniature alternating current operated direct current Transpac power packs wire directly into circuits for powering transistors, guided missile electronics, computers, miniaturized apparatus and standard circuitry. They are available in constant current or constant voltage types, with a variety of output arrangements. Model CC-15, illustrated, is a constant current type for supplying emitter bias for multistage transistor circuitry. Five separate 1.0-ma taps are provided which can be interconnected to supply either positive or negative current or both, or to yield a variety of current values in ½-ma steps up to 5 ma. Unit measures approximately 3 x 3 x 2 in., and weighs about 14 oz. Both 60 and 400 cycle models are available to commercial or MIL specifications. Made by **Electronic Research Associates, Inc.**, 715 N. Main St., North Caldwell, N. J.

▲ For more details circle NED-532 A4 on enclosed inquiry slip ▲

HEAVY DUTY MILL TYPE CYLINDERS

For rough and tough jobs.. ..Air and Hydraulic

Lindberg Mill Type Cylinders are heavy, tough cylinders . . with plenty of guts built in. They'll handle the meanest and most demanding job you can think of, and they'll perform dependably under the most adverse operating conditions.

Lindberg also builds a standard catalog line of heavy duty air and hydraulic cylinders . . up to 12". Hydraulic Cylinders available in 1500 and 3000 PSI. Ask for bulletin #731 (air) . . #701 (hydraulic).

LINDBERG AIR..HYDRAULIC CYLINDERS
Lindberg Engineering Company, 225 No. Laflin, Chicago 7, Ill.

▲ For more details circle NED-533 A4 on enclosed inquiry slip ▲

Cuts the cost of heavy-duty ventilation!

NEW R&M

Direct-Drive INDUSTRIAL FAN

You get extra cooling and ventilating power per dollar with this new fan! Its rigid construction puts it in a heavy-duty propeller-fan class, yet prices start as low as $160.00 (24" size)! New "gull-wing" blades, combined with an improved air inlet, set new highs in efficiency. Installation is easy, maintenance costs low. Whatever your ventilation problem—industrial, commercial or military—it will pay you to circle the enclosed inquiry slip now!

- Direct Drive reduces maintenance costs
- "Gull-Wing" airfoil blades for uniform pressure and added strength
- Square steel frame forms easy-mounting panel
- Aluminum alloy blades—non-rusting, non-crystallizing, non-overloading
- Heavy-continuous-duty motor. Ball bearings permanently lubricated and sealed (Information on explosion-proof motors available on request)
- Automatic shutters to fit all fan sizes
- Streamlined air inlet for greater efficiency

SEND THE INQUIRY SLIP TODAY!

ROBBINS & MYERS FANS for 1953

Robbins & Myers, Inc., Fan Division
387 So. Front St., Memphis 2, Tenn. ND-14

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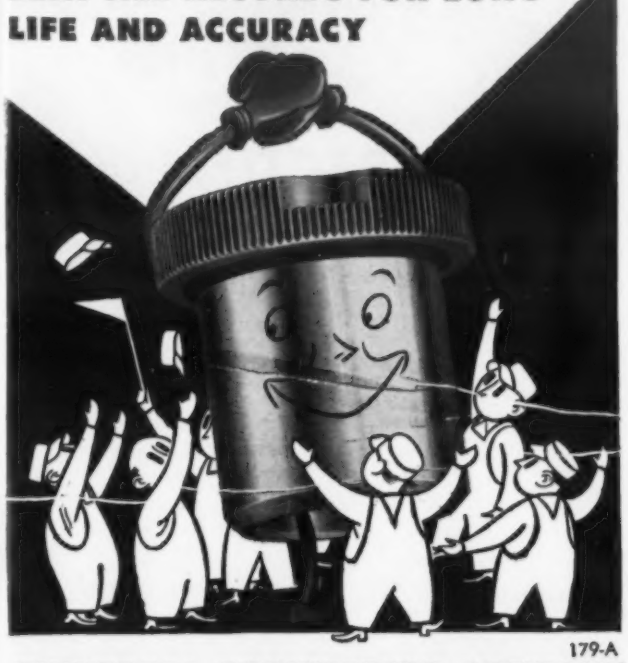
MEET THE CHAMP!

UNIVERSAL DRILL BUSHINGS BEAT ALL RECORDS FOR LONG LIFE AND ACCURACY



179-A

UNIVERSAL ENGINEERING COMPANY

FRANKENMUTH 5, MICHIGAN

▲ For more details circle NED-535 A4 on enclosed inquiry slip ▲

▲ For more details circle NED-536 A4 on enclosed inquiry slip ▲

SOUTH BEND GRINDER

A ruggedly built grinder that will give long, dependable service under hard use. Motor is enclosed in pedestal and drives through a V-belt. This removes weight of grinding wheels from motor bearings and practically eliminates vibration, Moreover, it shields motor and provides greater work clearance.

SPECIFICATIONS

Wheel Size: 8" dia. (½ h.p. motor), 10" dia. (¾ h.p. motor).
Spindle: Approx. speed 2450 r.p.m. Sealed ball bearings.
Motor: Standard 2875 r.p.m. 50 cycle or 3450 r.p.m. 60 cycle. Also D.C.
Over-all Dimensions: 49½" high, 18" wide, 20½" deep (10" Grinder ½" wider).

Write for literature on this and other machine tools.

SOUTH BEND LATHE
SOUTH BEND 22, INDIANA
Building Better Tools Since 1906

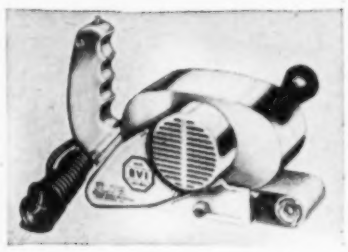
▲ For more details circle NED-537 A4 on enclosed inquiry slip ▲

HYDRAULIC PUMPING UNIT
low pressure, continuous duty unit

Series DU low pressure hydraulic pumping unit consists of motor, 5-gallon reservoir, breather, dip stick, overload protection and capacitor and relief valve set for 200 psi. It has needle bearings for continuous service. Unit is designed for use with Modernair components and systems to provide "on-the-spot" hydraulic power and volume output suited to individual installation requirements. Output volume is 2½ gpm. Made by **Modernair Corp.**, Dept. NED, 400 Preda St., San Leandro, Calif.

▲ For more details circle NED-538 A4 on enclosed inquiry slip ▲

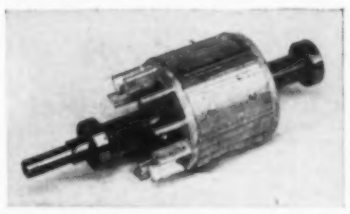
BELT SANDER
10 seconds required for belt change



Two-way combination switch on the Burgess portable belt sander can be used as either a momentary contact or constant type. Latter is useful when sanding large areas, or when sander is mounted on a work table for use as a bench sander. Built of cast aluminum, tool has an automatically cooled built-in motor and self-lubricating bearings. Quick-acting belt tension release permits changing belts in less than 10 seconds. Unit is chain driven, quiet and weighs 7¼ lb. Belt is flush with left side. Made by **Burgess Vibrocrafters, Inc.**, Dept. NE, 180 N. Wabash Ave., Chicago 1, Ill.

▲ For more details circle NED-539 A4 on enclosed inquiry slip ▲

CONSTANT SPEED MOTOR
features simple rotor design



Absolute constant speed under all load conditions can be obtained from Relsyn reluctance type, synchronous motor. Unit differs from ordinary synchronous motors in that it has a simple rotor design and no excitation winding, slip rings or brushes. Squirrel-cage of cast aluminum provides necessary torque for starting. During operation at synchronous speed, torque is produced entirely by interaction of rotating magnetic field of stator winding with iron parts of the rotor, with squirrel-cage acting as damper winding to prevent hunting. Motor is free of radio interference. Made by **Kurz & Root Co.**, 232 E. North Island St., Appleton, Wis.

▲ For more details circle NED-540 A4 on enclosed inquiry slip ▲

POROUS METAL IMPREGNATION
system is available as packaged unit

Packaged system for impregnation of porous metals is based on polyester resins and vacuum pressure cycle. It is available in two sizes for varying production requirements. Both are installed with tanks, reservoir, vacuum pump, vapor trap, valves, gage and pipes. Equipment is used along with 19V5 impregnant to add tightness and corrosion resistance to vital parts such as pump assemblies, refrigeration units, aircraft parts, valve bodies, spraying equipment and optical units. It is effective for all ferrous and nonferrous cast metals, for wrought products, and as a preplating treatment for powder metal parts. Used also as a pretreatment, it also increases life of both organic and inorganic metal finishes. Made by **American Metaseal Mfg. Corp.**, 607 65th St., West New York, N. J.

▲ For more details circle NED-541 A4 on enclosed inquiry slip ▲

Great Motors from Great Britain!

- world-famous NEWMAN MOTORS
- net savings up to 40%
- immediate delivery
- unconditionally guaranteed
- superior design— to N.E.M.A. standards

For the first time, the complete world-famous line (2 million installed in 62 countries since 1935) of NEWMAN MOTORS, built to N.E.M.A. standards, is offered to the American Market.

Immediately available from our warehouse in New York in a complete range of squirrel cage and wound rotor types in sizes up to 230 H.P. *Any motor sent free and without obligation for examination and testing.*

These are new, high-quality motors stamped with the prestige of a great motor-making company. Vast savings, dependability, unconditional guarantee are offered to American buyers.

Write for a catalog and price list to-day

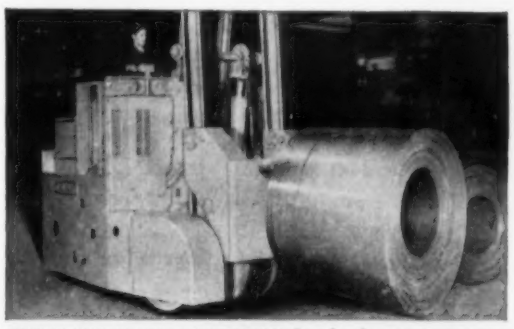
Newman INDUSTRIES (AMERICA) INC.
43 BROAD STREET, NEW YORK 4, N.Y.

▲ For more details circle NED-542 A4 on enclosed inquiry slip ▲

B.F.Goodrich

FREE TIRE AND WHEEL ANALYSIS can save you as much as 50% on industrial tires

ROUGH HAULING SURFACES? They can slash tire life, increase maintenance costs. The BFG man can show you how to get maximum tire life.



HEAVY LOADS AND EQUIPMENT? Overloads can cause premature tire failures. Your BFG man knows how to match the tire and the load.

Here's how to start cost cutting

Mail the coupon below for free information on the B. F. Goodrich Tire and Wheel Analysis Plan. Without obligation a trained BFG man will study your materials handling operations. He will tell you what type and size tires, what tread design and compound will serve you best.

Because BFG makes a *complete* line of industrial tires, you get impartial recommendations, plus maintenance suggestions that alone can cut costs 20%. Mail the coupon today! A special TW Analysis Plan is available for manufacturers of materials handling equipment.

WRITE FOR THIS BOOK

Specify B. F. Goodrich tires when ordering new equipment

The B. F. Goodrich Co.
Tire & Equipment Division
Department TW-352, Akron 18, Ohio.

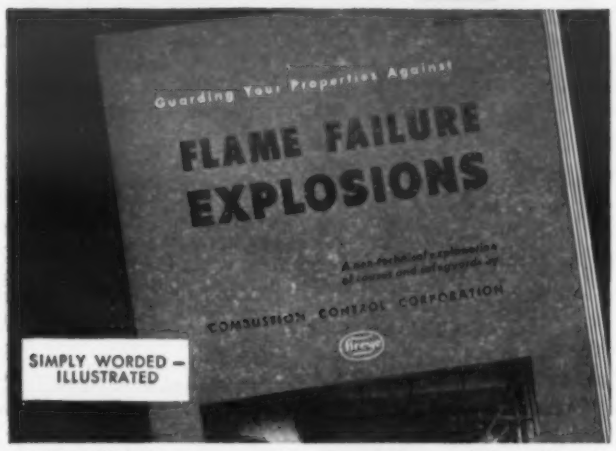
Please send me:
☐ *Additional information* on your new Tire and Wheel Analysis Plan
☐ A free copy of your "Industrial Tire Guidebook"

Name _____
Company _____
City _____ Zone ____ State ____

RESEARCH KEEPS B.F.Goodrich FIRST IN RUBBER

▲ For more details circle NED-543 A4 on enclosed inquiry slip ▲

FREE! New Safety Information 4-out-of-5 Plants Need!



IF YOU BURN oil, gas, powdered coal or other fuel, for power, processing or heating, the chances are 4-out-of-5 that you do not have complete safeguards against burner flame-failure explosions.

Why take chances . . . ? This new booklet gives you all the information you need to prevent flame-failure explosions. With it you can spot burner explosion hazards in your plant — identify obsolete or inadequate "protective" devices — determine your needs for the most modern safeguard equipment. Get your copy, free! Please give your company name and title.

WRITE:

COMBUSTION CONTROL CORPORATION
Dept. DB-1 718 Beacon Street
Boston 15, Mass.
fireye

▲ For more details circle NED-544 A4 on enclosed inquiry slip ▲

NEW MODEL M

SERVIS RECORDER

electrically records productive and down time of industrial machines

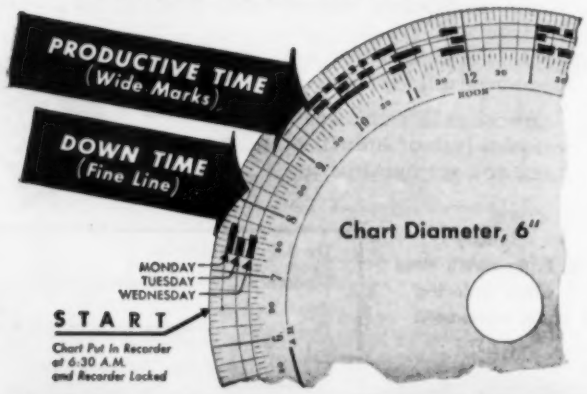
Mount Model M Servis Recorders on the wall of your office or any other convenient place, then just connect them by wire to your machines.

FEATURES INCLUDE...

- Visible Recording
- Location anywhere—distant from machines
- Far Lower Cost than comparable devices
- No ink—no pen to obscure chart
- Available with Elapsed Timer or Counter

THE CHART (sample portion below) instantly shows ALL stops and delays. So you can reduce down time, increase production, and thus repay the cost of Servis Recorders *many times over!* Model M is also valuable in time studies to set rates and as a check on the exactness of process operations.

WRITE FOR "MODEL M" FOLDER



THE SERVICE RECORDER CO.
1375A Euclid Avenue • Cleveland 15, Ohio

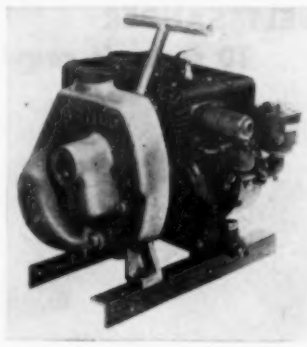
▲ For more details circle NED-545 A4 on enclosed inquiry slip ▲

INSTRUMENT CALIBRATOR for pressure gages and instruments

Testing and calibration of pressure instruments which operate between 20 in. of water and 25 psi can be performed with this pneumatic instrument calibrator which operates on a 35 psi air source. It can be adjusted accurately to produce any predetermined pressure by adding or removing calibrated weights from a weighbeam. Calibrator is portable and can be used to check instruments without removing them from their mounting. Made by **Republic Flow Meters Co.**, 2242 Diversey Pkwy., Chicago 47, Ill.

▲ For more details circle NED-546 A4 on enclosed inquiry slip ▲

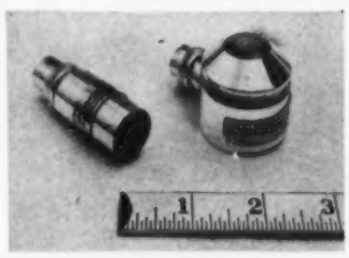
PORTABLE CENTRIFUGAL PUMP delivers 100 gpm at lowest head



Liquid transfer, fire fighting and dewatering pit and flooded areas are applications for which model 114 self-priming portable 100-gpm centrifugal pump is highly suited. Only moving parts are motor, pump impeller and seal. Maximum head is 100 ft. Open-faced nonclogging impeller handles all solids passed by suction strainer affixed to end of suction hose. Pump is positioned on threaded engine shaft and is kept tight by engine rotation, yet is easily removed. Intake and discharge connections are tapped for 1½-in. pipe thread. Complete outfit including redesigned 1½-hp Briggs & Stratton engine weighs only 65 lb. Made by **Kenco Pump Co.**, 1125 N. Ridge Rd., Lorain, O.

▲ For more details circle NED-547 A4 on enclosed inquiry slip ▲

ULTRASONIC TRANSDUCERS for thickness gaging of metals



Efficiency plus compactness of series of crystal transducers or probes for ultrasonic thickness gaging with the Audigage thickness testers make possible measurements on metal of sharply-tapered section, compound curvatures and other unusual conformations. These ½-in. diameter type B transducers employ both quartz and barium-titanate ceramic as active elements. Small contact area and high energy output enables use of probes on such difficult objects as knuckle bends, pipe elbows and deeply grooved or corroded areas. Probes are fitted with quartz wearplates for mechanical protection, are available in either straight or right-angle mountings and are directly interchangeable with standard probes. Made by **Branson Instruments, Inc.**, Dept. A, 430 Fairfield Ave., Stamford, Conn.

▲ For more details circle NED-548 A4 on enclosed inquiry slip ▲

MAGNETIC STARTER has combination disconnect switch

Designed and built to JIC standards with NEMA type XII enclosures, type 4120 alternating current combination starters are provided with disconnect switches and are usable wherever nonreversing magnetic across-the-line starters with built-in disconnect means are specified. They are particularly suitable where controls are subjected to splashing oil or coolant. Disconnect switch is mechanically interlocked with box cover, and unit is designed for easy servicing and maintenance. Maximum ratings are NEMA size 3, 50 hp, at 440 v three phase 60 cycle current. Made by **Ward Leonard Electric Co.**, 51 South St., Mt. Vernon, N. Y.

▲ For more details circle NED-549 A4 on enclosed inquiry slip ▲

One More Thing You Have Been Asking For—

"Centre-Seal'd" POWER RECTIFIERS

The "outside" collector serves as a seal against paint and moisture penetration to the inside or center collector. This provides clean contact between the inside collector and plate surface — a near-zero resistance even after years of operation.

Write or call for complete information.

Sarkes Tarzian INC.
RECTIFIER DIVISION
415 N. COLLEGE AVE., DEPT. W-1 BLOOMINGTON, IND.
In Canada—50 St. Clair Ave. N. W., Toronto

▲ For more details circle NED-550 A4 on enclosed inquiry slip ▲

Speed Up Material Handling

Here's a handy, mobile crane for lifting or loading jobs around your plant. Ideal for dismantling, moving or erecting machinery . . . loading and unloading structural iron, pipe, bars, lumber and equipment of all types. The UNIT 357 is self-propelled . . . rides on rubber at road travel speed . . . is easy to maneuver even in cramped yard conditions. Operated by ONE man . . . powered by ONE engine . . . swings in a 360° circle. Full vision cab gives complete visibility. Promotes Safety. Write for Catalog.

UNIT CRANE & SHOVEL CORP.
6607 W. Burnham Street, Milwaukee 14, Wis., U. S. A.

UNIT
CRANES • CLAMSHELLS • MAGNETS

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FOR DEFENSE INDUSTRY MACHINIST WORKMAN FARMER

1ST IN METAL TOOL BOXES

CASES—CHESTS—CABINETS

Here are the world's finest metal boxes. They're better constructed—better looking. Known for their fine materials—workmanship—attractive design. These boxes outlook—outlast—outsell competition. Write for FREE book, including complete information.

Waterloo
VALVE SPRING COMPRESSOR CO.
WATERLOO, IOWA

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Solder faster, better...

WASSCO GLO-MELT RESISTANCE SOLDERING

PLIERS HANDPIECE for "sweat" soldering joints in copper tubing, piping and large electrical terminals. It is used with the basic GLO-MELT Power Unit where ground connections are inconvenient or where heat of two carbons is required. Sturdy, lightweight — made of aluminum and tough fibre. Ideal tool for plumbers, refrigeration and motor repair shops!

for complete details WRITE

Basic GLO-MELT Power Unit is rated at 450 Watts. 24 separate heats. Uses 115 V. 60 cycle power source.

Panel Accessory for production line soldering of small parts held across the gap of 2 carbon tips.

A Complete Line of Soldering Accessories Available

WASSERLEIN MFG. CO. INC.
126 W. CASS ST. • JOLIET, ILLINOIS
In Canada: 50 St. Clair Ave. W., Toronto

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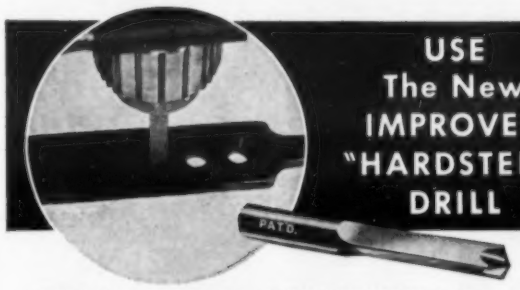
Drill Hardened Steels without Annealing—



USE The New IMPROVED "HARDSTEEL" DRILL

With the new, improved "HARDSTEEL" Drill, you can do accurate, smooth drilling, countersinking, counterboring and reaming in steels hardened by any process without first annealing the work. And they work with equal ease on work-hardening steels and high carbon—high chrome steels of any degree of hardness.

"HARDSTEEL" Drills fit standard drill presses. They save time and reduce rejects. They permit engineering changes requiring additional drilling after hardening. And parts drilled after hardening always match at assembly.

Write for a copy of the "HARDSTEEL" Operators Manual showing how "HARDSTEEL" drills are cutting costs in thousands of plants.

You Harden It—We'll Drill It—With "HARDSTEEL"

BLACK-DRILL COMPANY, INC.
1380 East 222nd St. • Cleveland 17, Ohio

Also makers of— BLACK DRILLING UNITS—AUTOMATIC, SELF-CONTAINED—FOR COST-CUTTING PRODUCTION ON ALL MATERIALS *Write for information*

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Write for your copy of this new 32-page engineering manual . .

MUELLER BRASS CO.

forgings
• brass
• bronze
• aluminum

This new illustrated manual is full of information about Mueller Brass Co. brass, bronze and aluminum forgings . . . includes charts, graphs, facts and figures that give complete data about design factors, tolerances and the chemical, mechanical and physical properties of the MBC forging alloys. Get your copy of this valuable handbook today . . . it's yours for the asking.

MUELLER BRASS CO., PORT HURON 27, MICHIGAN
112-A

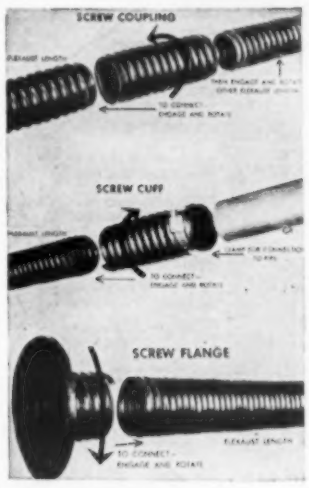
▲ For more details circle NED-555 A4 on enclosed inquiry slip ▲

REPLACEMENT CYLINDERS
for plating barrel superstructures

Line of replacement plating cylinders made of transparent plastic H-T Sincolite will fit all makes of barrel superstructures, regardless of age. Material is resistant to acids and alkalies, is non-deteriorating and non-contaminating, light in weight and long wearing. Cylinders consist of two heads, six heavy rails and five panels and have a tensile strength of 10,000 psi. They hold their shape under temperatures up to 200° F. Made by **Singleton Co.**, 5321 St. Clair Ave., Cleveland, O.

▲ For more details circle NED-556 A4 on enclosed inquiry slip ▲

EXHAUST HOSE FITTINGS
couplings, cuffs, flanges screwed on



Lengths of Flexaust can be assembled with much the same ease as threading pipe by application of screw couplings, screw cuffs and screw flanges. Couplings (top) join hose lengths temporarily by threading or permanently by threading plus cementing. One end of cuffs (middle) permits clamping hose to pipe, while other end threads on regular Flexaust hose. Neoprene coated and impregnated flanges (bottom) thread to hose and are offered with or without bolt holes. Flanges range from 7¼ to 17¾ in. OD and from ⅜ to ¾-in. thick. All accessories are available in all standard hose sizes. Made by **Flexaust Co.**, Dept. NA, 100 Park Ave., New York 17, N. Y.

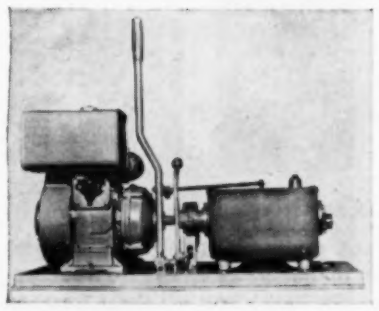
▲ For more details circle NED-557 A4 on enclosed inquiry slip ▲

VACUUM CLEANER
heavy duty dry pickup unit

Designed for heavy duty dry clean up work, model 215 vacuum machine is powered by a ⅝-hp motor. Air stream throws picked up dirt against sides of the dust container to minimize clogging of the internal fabric air filter. The 52-lb machine tracks well at the slightest pull on the hose, being equipped with two 10-in. wheels with 1¾-in. pneumatic tires. All sweeping tools have swivel connections for continuous surface contact without twisting the hose. It can be converted for blowing by reversing the hoses. Made by **Hild Floor Machine Co.**, Dept. NE, 740 W. Washington Blvd., Chicago 6, Ill.

▲ For more details circle NED-558 A4 on enclosed inquiry slip ▲

POWER TRANSMISSION UNIT
integral unit is portable



Briggs & Stratton 5-hp engine with 6:1 reduction supplies the power for this portable integral power transmission unit. Engine is connected to an oil-tight transmission containing two Maxitorq disk clutches in line on a single shaft for forward and reverse drive. Transmission has 2:1 reduction and a brake and shifting lever. Entire 186-lb unit is mounted on a framed steel base that is 38¾ in. long. Applications include power unit, winch, portable hoist or transmission element for machine tools. Made by **Soilaire Industries**, 1200 Second Ave. S., Minneapolis 3, Minn.

▲ For more details circle NED-559 A4 on enclosed inquiry slip ▲

OPW Loading Assemblies have long been known for their really effortless flexible loading, practical compactness, maneuverability and long service life.

A wide range of spring balanced and counter balanced styles makes possible many and varied applications to fit all requirements.

OPW

LOADING ASSEMBLIES

for faster, safer, easier truck tank loading

Catalog F-7 provides a comprehensive study of OPW styles, engineering data, applications, components, etc. Free on request.

OPW CORPORATION
2735 Colerain Ave. Cincinnati 25, Ohio

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THERE'S
NO CATCH
TO
Koiled Kords
SAYS
STROBO RESEARCH

"A great convenience, a tremendous impetus to sales", says Edward Farber, of Strobo Research, Milwaukee. Koiled Kords are now used on all the STROBOFLASH® units made by this company and Mr. Farber claims the retractile cord "adds that certain additional look of quality and efficiency."

On all electrical equipment that moves, Koiled Kords eliminate long trailing wires. They are safe, long lasting, convenient and attractive. Whether your problems concern consumer or industrial products, Koiled Kords may prove a tremendous asset.

Write for booklet 1052-G that shows many applications for Koiled Kords. It's free and full of ideas.

Koiled Kords INCORPORATED
BOX K, NEW HAVEN 14, CONN.

▲ For more details circle NED-561 A4 on enclosed inquiry slip ▲

YOUR ANSWER TO FLEXIBLE TUBING PROBLEMS

PENFLEX "FLEXINEERING"

THE CORRECT TUBING...PLUS TECHNICAL AID ON EVERY JOB

is the know-how of the Penflex Engineer plus the can-do of Penflex Flexible Metallic Tubing serving you from design board right up to job installation and maintenance. It is the scientific application of the right type of steel, bronze, or aluminum flexible tubing to your air, oil, water, gas, steam, volatiles, or light solids conduction requirements. It is the specific recommendation of the right size and weight flexible tubing—four-wall interlocked or seamless welded corrugated type—in sizes from ½" to 24" I.D. And it is the nation-wide supply of Penflex in any quantity where you want it, when you want it.

Get This New Data Book on the complete Penflex line of Flexible Tubing, Hose, Couplings

Pennsylvania Flexible Metallic Tubing Co., Inc., 7208 Powers Lane, Phila. 42, Pa.

PENFLEX

HEART OF INDUSTRY'S LIFE LINES

For more details circle NED-562 A4 on enclosed inquiry slip

Drill holes faster ...more accurately WITH A KELLER AIRFEEDRILL

The Airfeedrill is a fully automatic pneumatic drill that operates through a complete drilling cycle by simply pressing a control valve. It brings big savings in production costs.

Entirely air-controlled and operated

Easily shifted from job to job

Pneumatic cycling to speed production

Drills metal, wood, composition, plastics

Accurate holes without costly fixtures

Attaches in any position, at any angle

Used in close centers, and in tight places

Send for illustrated descriptive bulletin . . . "The Hole Story"

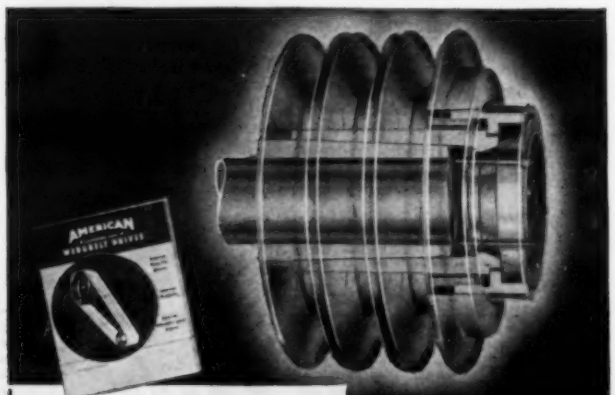
Keller Tool Company

GRAND HAVEN, MICHIGAN

For more details circle NED-563 A4 on enclosed inquiry slip

ADJUST SPEED IN A HURRY WITH THIS LOW-COST DRIVE . . . TO A SPLIT RPM

With this low-cost American Adjustable-Speed Drive you can change driven speeds as much as 100%! A simple screw adjustment on the sheave changes its effective pitch diameter quickly, easily . . . permits you to obtain optimum driving speed for any operation; synchronize production lines; compensate for variations from rated motor speeds or calculated speeds of belt drives. Widely used in textile, chemical, mining and many other industries. Write today for free catalog. No obligation.



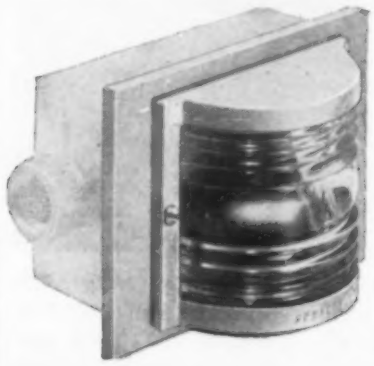
AMERICAN PULLEY COMPANY
4294 Wissahickon Ave., Phila. 29, Pa.
Please send me the American Adjustable-Speed Drive Catalog.
Name
Title
Address
City State Zone

At the profit end of the machine

Power Transmission by AMERICAN PULLEY COMPANY

For more details circle NED-564 A4 on enclosed inquiry slip

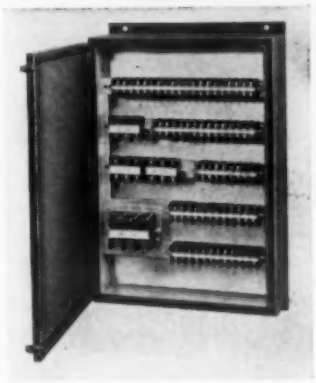
LOW WATTAGE LIGHT
for warning, signal or marking use



Fresnel lens incorporated in the PL-5 low wattage lighting unit enables its 7C7 lamp to provide a continuous light pattern in a 180-degree arc. Weatherproof unit is furnished either for ½-in. pipe mounting from back or bottom, or for FS box mounting. Use can be on control panels, machinery and to mark hazardous areas. Blue, green, red, orange, yellow, white or clear lamps are available. Made by **Spero Electric Corp.**, Dept. AW, 14838 Euclid Ave., Cleveland 12, O.

For more details circle NED-565 A4 on enclosed inquiry slip

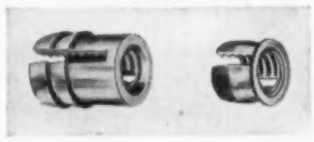
TERMINAL JUNCTION BOXES
made in eight standard sizes



Largest unit in line of eight standard terminal junction boxes will accommodate 168 25-amp terminals. Fifty and 100-amp terminals can also be used in combination with the 25-amp terminals. External mounting feet are provided, and hinged door is gasketed with Neoprene to prevent entrance of oil or coolants when used on machine tools. Terminals are mounted on removable straps and have generous wiring space. With no knock-outs, box can be entered as desired. Made by **Square D Co.**, 4045 N. Richards St., Milwaukee 12, Wis.

For more details circle NED-566 A4 on enclosed inquiry slip

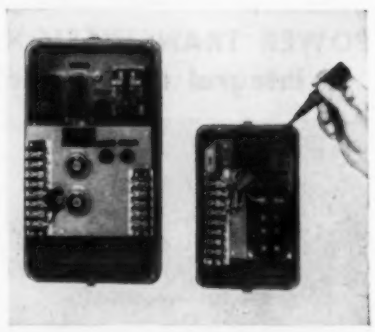
LOCKING THREAD INSERTS
for blind holes and thin materials



Thread sizes from 0-80 to ⅜-16 NC and NF are available in two types of Banc-Lok locking thread inserts. They are made for use in blind holes in wood, plastics, castings and molded parts (type N) and for use in all kinds of materials too thin to tap (type T). Both types are made in aluminum, brass, steel and stainless steel in wide range of sizes and designs. Type N (left) has one or two sharp fins or diamond knurling for holding power in holes. Type T (right) has flat and countersunk heads and with several grip lengths for thickness ranges from 0.025 to 0.125-in. Made by **Boots Aircraft Nut Corp.**, Banc-Lok Div., Dept. N, Norwalk, Conn.

For more details circle NED-567 A4 on enclosed inquiry slip

PHOTOELECTRIC RELAYS
two models have improved design



Two photoelectric relays, one rated at 450 operations per minute and the other a high-sensitivity model rated at 600 operations a minute, can be used in many counting, sorting, indicating and controlling applications. Both operate on standard power supply. Choice of enclosures includes dust-tight, weather-resistant, explosionproof and water-tight types. Smaller unit has two single-pole double-throw contacts making it possible to control two independent loads. Operating distance from a 2-foot candle light source is adjustable up to 70 ft. High sensitivity relay responds to light changes as small as ½-foot candle and has two dials to adjust both sensitivity and time delay duration. Made by **General Electric Co.**, Schenectady 5, N. Y.

For more details circle NED-568 A4 on enclosed inquiry slip

temperature conversion tables FREE C to F and F to C

PANDUX SURFACE TEMPERATURE THERMOMETER

. . . stops guesswork on surface temps. The PANDUX gives linear thermal readings to ±2° full-scale accuracy. Unit sealed against corrosive atmospheres. Mirror dial protects element against external radiation. Easy to affix to surfaces with magnet or silicone grease. 2" in diameter; weighs 1 oz. Fully guaranteed. Specify model wanted.

Order today.

For checking: Pipes and ducts; Dies and molds; Freezers, ovens, boilers; Ceilings, walls and floors; Motors and cylinder blocks; Bearings and journals; And hundreds of other vital uses

ONLY $6.75 Complete with magnet clamp and 1/2 oz. of silicone grease.

Model 309F: −50°F to 250°F
Model 309C: −50°C to 110°C
Model 310F: 0°F to 300°F
Model 310C: −10°C to 150°C
Model 311F: 70°F to 370°F
Model 311C: 20°C to 180°C

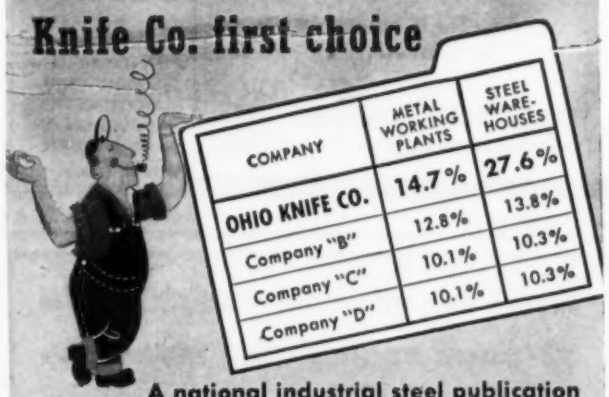
Write for FREE Temperature Conversion Chart No. N-14

PACIFIC TRANSDUCER CORP.
11921 W. Pico Blvd.—Los Angeles 64, California

For more details circle NED-569 A4 on enclosed inquiry slip

they check out OK

Market Survey reveals Ohio Knife Co. first choice



COMPANY	METAL WORKING PLANTS	STEEL WARE-HOUSES
OHIO KNIFE CO.	14.7%	27.6%
Company "B"	12.8%	13.8%
Company "C"	10.1%	10.3%
Company "D"	10.1%	10.3%

A national industrial steel publication mailed a preference questionnaire to 1800 metal working plants and steel warehouses. Returns computed showed The Ohio Knife Co. first choice in preference ratings of Slitter Knives and Shear Blades.

Here's Why Ohio Knife Co. slitting and shearing knives earned this reputation primarily by reducing "downtime". Production savings are realized because Ohio Knives give longer runs, require less regrinding and deliver precision work even on the toughest jobs. OK Slitters are made from the finest tool steel, precision ground to ± .0002 tolerances on thickness, diameter and bore. OK Shear Blades are specially heat treated to bring out best characteristics for different jobs, to give maximum toughness and keen edge-holding qualities. Our engineering department is at your service for recommendations on your slitting and shearing problems. Write Dept. H.

Manufacturers of OK WELDED HIGH SPEED SHEAR BLADES • OK SOLID STEEL SHEAR BLADES • OK SLITTER KNIVES • ROTARY SHEARS, CUTTERS, CHIPPERS, TRIMMERS

GO WITH OHIO GREEN

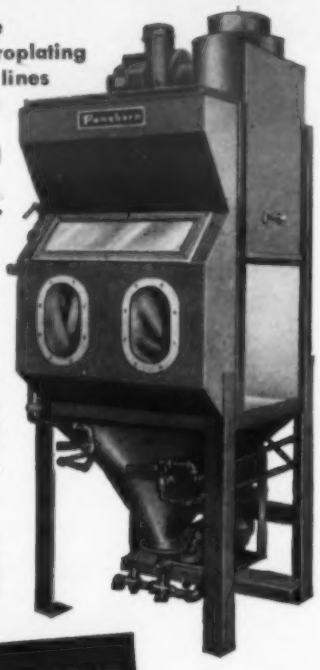
THE OHIO KNIFE CO.

CINCINNATI 23, OHIO

For more details circle NED-570 A4 on enclosed inquiry slip

Pangborn HYDRO-FINISH

- deburrs • removes scale
- prepares surfaces for electroplating
- removes, blends grinding lines
- finishes threaded sections for fit
- improves die making and maintenance
- improves cutting tool life.



PANGBORN Hydro-Finish does all these jobs and more! Fine mesh abrasives suspended in water give you a precision finish . . . hold tolerances to .0001". Vary abrasives, air pressures, work distances, ratio of liquid to abrasive and you can do almost any finishing job faster and better!

GET THE FACTS on how Hydro-Finish can save *you* money! Write for Bulletin 1400A to: PANGBORN CORPORATION, 2400 Pangborn Blvd., Hagerstown, Md.

Pangborn BLAST CLEANS CHEAPER *with the right equipment for every job*

▲ For more details circle NED-571 A4 on enclosed inquiry slip ▲

NEW PRESS BRAKE

IN TWO SIZES 6 FT. and 8 FT.

• LOW PRICED • BIG PRESS FEATURES

- Buttress Threads in revolving bronze nut with release grooves to prevent jamming.
- One Piece Construction (welded, normalized, machined in one piece).
- Ball and Roller Bearings throughout.
- Fine adjustment.

Made by the makers of famous SEMCO "34 YEAR" BRAKE DIES.

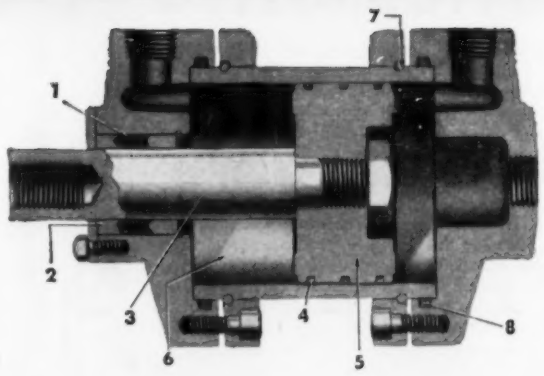
Write for NEW color folder and prices of PRESS BRAKES and 26 standard BRAKE DIE designs. Send die specifications for estimate.

SEMCO SERVICE MACHINE CO., INC.

202 MILLER STREET, ELIZABETH 4, N. J.

▲ For more details circle NED-572 A4 on enclosed inquiry slip ▲

Hydraulic Cylinders



1. Self-adjusting rod packing.
2. Ample bronze rod guide.
3. Over-size, ground and polished alloy piston rod.
4. Closely-fitted step-seal-cut piston rings.
5. Heavy duty alloy cast pistons with large bearing surfaces.
6. Seamless drawn steel tubing, precision honed.
7. Keeper rings eliminate tie rods. Permit rotation of covers to convenient pipe locations.
8. "O" ring seals eliminate gaskets. Assure leak-proof operation.

Available in 300 P. S. I. and 1500 P. S. I. 3000 P. S. I. furnished. 7 mountings; 10 bores; strokes to 96"; standard or 2:1 over-size rod; cushioning. Send for Cat. 105.

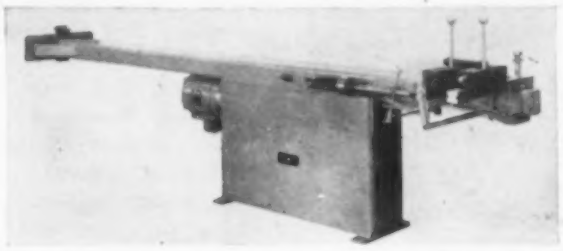
RIVETT LATHE & GRINDER INC.

Brighton 35, Boston, Mass., Dept. NED-1

▲ For more details circle NED-573 A4 on enclosed inquiry slip ▲

HYDRAULIC TUBE BENDER
capacity is 2-in. OD 16-gage steel

Hydraulic model 60 tube bender has capacity of 2-in. OD x 16-gage steel tubing and is made for either right or left hand operation. It can be furnished with



automatic indexing for degree and plane of bend, with hydraulic mandrel extractor and manual or hydraulic clamping as desired. Speed adjustment range makes possible use for both development and production. Flexible mandrels and wiper dies can be furnished for close tolerance or difficult work. Standard bending dies are available for all tube sizes up to machine capacity. Safety stop bar protects operator. Made by **Leonard Precision Products Co.**, Dept. 247, P. O. Box 176, Garden Grove, Calif.

▲ For more details circle NED-574 A4 on enclosed inquiry slip ▲

HEAVY DUTY WHEEL BLOCK
holds even on ice or packed clay

Heavy duty safety wheel block, measuring 14 in. high and with a 15 x 10 in. base, is designed to provide maximum stability and holding power for heavy vehicles and loads under any condition. It is cast from alloy steel, and holds on ice, wet pavement and packed clay regardless of vehicle's weight or condition of grade. Tread plate is designed to accommodate all sizes of truck tires. Base of block has heavy steel gripper teeth. Unit has integral handle, weighs 30 lb and is safety yellow. Made by **Calumet Steel Castings Corp.**, 1650 Summer St., Hammond, Ind.

▲ For more details circle NED-575 A4 on enclosed inquiry slip ▲

VIBRATION ISOLATORS
have multiple compensating springs

Both circular cup and square plate mountings are available in the Equiflex series of all-metal vibration isolators which have multiple compensating springs. Capacities are 6, 14 and 35 lb. Units have long service life, and are not subject to permanent drift or set. Performance is unaffected by temperature extremes, and mountings withstand 100-hr salt spray tests. Shocks up to 15G are sustained without damage, and equipment is kept captive up to 30 G. Extra damping can be obtained by shrouding the springs with polyethylene tubing. Made by **Ucinite Co.**, 459-N Watertown St., Newtonville 60, Mass.

▲ For more details circle NED-576 A4 on enclosed inquiry slip ▲

ROOF VENTILATOR
fan works through Venturi opening

Power fan of this Uno-Venturette package roof ventilator works through Venturi opening and has sealed motor bearings. Constructed of rustless aluminum, ventilator can be used in all type buildings in space between insulated ceiling and roof. It can be used in factory degreasing and welding booths, to exhaust fumes and to cool equipment in electric sub stations. Other features include integral aluminum roof base, removable automatic heat seal to prevent winter heat loss and dustproof, moisture resistant motor. Three sizes are offered with capacities from 600 to 2100 cfm at zero static pressure. Made by **Uno Ventilator Co.**, 1229 Eastern Ave., Malden 48, Mass.

▲ For more details circle NED-577 A4 on enclosed inquiry slip ▲

THE Improved FLEX-A-FOAM FILTER MASK

Your best ounce of protection against

IRRITATING DUST

HERE'S WHY:

★ **Workers wear it** Lightweight (just 1 ounce), snug, comfortable and easy-to-breathe through, Flex-a-Foam is the *one* respirator your workers actually *welcome*.

★ **It's super-efficient** Flex-a-Foam's pure latex filter protects against nuisance dust particles 100 times smaller than the eye can see!

★ **It's simple** Only four sturdy, long-wearing parts — all interlocking — all *unconditionally* guaranteed.

★ **And—it's economical** *Low first cost* — less than any other *quality* respirator on the market. *Low upkeep* — washable filter outlasts throwaway type by more than 100 to 1!

Dust Protection Your Workers Will Welcome and *Wear*

SAMPLE STILL ONLY $1.40 POSTPAID

FLEX-A-FOAM® FILTER MASK

THE GOGGLE PARTS COMPANY • CLEVELAND 13, OHIO

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THERE'S A STURDY

BURKE

FOR EVERY PURPOSE

Thousands of efficient, low cost Burke Bench Millers are proving their superiority in Tool, Development and School Shops and a wide variety of mass production operations.

Send for complete data on models attachments, accessories and suggestions for putting Burke's to work for your profit.

THE U. S.-BURKE MACHINE TOOL DIV.

Brotherton Road 2, Cincinnati 27, Ohio

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MOLDED CARBON and GRAPHITE *Specialties*

Seldom can any material surpass carbon and graphite for practical solutions to problems involving friction, high temperatures, corrosion, shaft sealing, and arcing.

Let This Booklet Help You!

Write on company stationery for your copy of the Stackpole Carbon Specialties Book 40. Besides describing dozens of Stackpole items, it contains interesting evidence of the amazing versatility of carbon and graphite in modern design and engineering.

STACKPOLE

STACKPOLE CARBON COMPANY
St. Marys, Penna.

▲ For more details circle NED-580 A4 on enclosed inquiry slip ▲

Can you name an operation that will save as much for you as weighing?

It's good business to watch weights closely! Check at receiving, shipping, production stages without delaying handling.

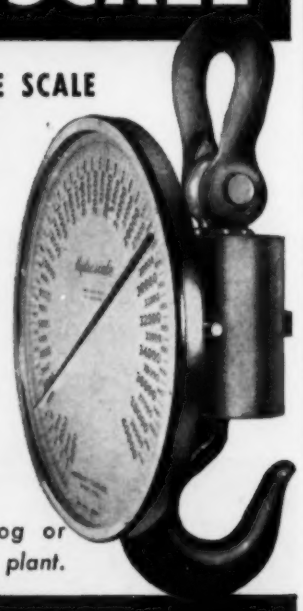
Put a stop to paying for dunnage, inaccuracies, other's miscalculations that rob you of your profit. Weigh loads as you lift them to move them by crane or hoist. Speed inventories, eliminate labor and equipment tie-ups at the weighing station.

Thousands of HYDROSCALES are at work in large and small plants all over the country.

The cost of weighing has been reduced to a minimum by—

HYDROSCALE

HYDRAULIC CRANE SCALE



36 models
500-200,000 lbs.

12", 24", 30" dials

Tilt face models for high level reading

Combined reading kilogram-pound dials

Batching models indicate pour-off

Write for our catalog or demonstration in your plant.

HYDROWAY SCALES, INC.
20624 WEST 8 MILE ROAD · P. O. Box 4754 · DETROIT 19, MICH.

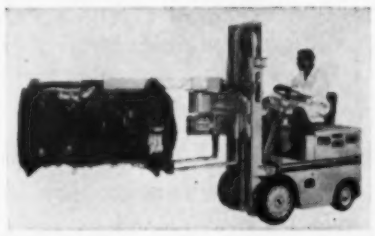
▲ For more details circle NED-581 A4 on enclosed inquiry slip ▲

SAFETY GLOVES
finger tips resist 2 tons pressure

Lightweight safety glove has steel box reinforced tips on first three fingers which have individual resistance to 2 tons pressure, giving a combined resistance of 6 tons for each hand. Known as Free Touch Armortip Safety Glove, it is made from green sueded pigskin and is clearly labeled so that it can be easily recognized. It is made in both safety cuff and gauntlet styles. Made by **Wolverine Shoe & Tanning Corp.**, Dept. 61, Rockford, Mich.

▲ For more details circle NED-582 A4 on enclosed inquiry slip ▲

FORK TRUCK CLAMP
for selective tiering of loads



Swinging clamp attachment for gas and electric Carloader fork lift trucks can reach out to either side of a narrow aisle to grasp or tier loads behind material already stacked. Attachment can be adapted for heavy machines, but has a capacity of 600 lb regardless of truck capacity. It has a 180-degree traverse and a wide range of gripping reaches, either by hydraulic shift alone or by combination hydraulic shift and manual adjustment of rear pad. Clamping range is 13 to 42 in. Attachment is detachable and interchangeable with other standard attachments. It is equipped with detachable 30-in. forks to up-end bales mechanically when desired. Made by **Clark Equipment Co.**, Industrial Truck Div., 1952 Arze St., Battle Creek, Mich.

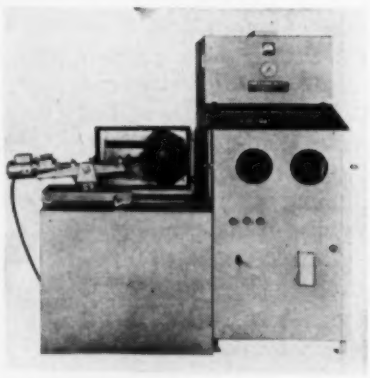
▲ For more details circle NED-583 A4 on enclosed inquiry slip ▲

METAL HACKSAW
has 6¾ x 6¾-in. capacity

Having a capacity of 6¾ x 6¾ in., Speedy-Cut metal hacksaw is a two-speed machine for general purpose use. Adjustable gibs on top and side of saw frame guide provide wear compensation. Trip switch automatically stops saw at end of each cut and allows frame to raise to starting position. A centrifugal coolant pump is provided. Rear vise jaw can be set at the required work angle, and the front jaw automatically adjusts itself to work size and shape. Fine pressure adjustment is set by feed handwheel, pressure indicator and graduated scale. V-belt step-sheave drive is used. Made by **Peerless Machine Co.**, Dept. N, 1600 Junction Ave., Racine, Wis.

▲ For more details circle NED-584 A4 on enclosed inquiry slip ▲

WET BLASTING EQUIPMENT
finishes, cleans and deburrs



Small screw machine products, stampings, small castings and extrusions and other small parts can be finished, cleaned or deburred by the Pressure Blast Roto-Barrel. Work is loaded in an expanded metal, Plastisoled barrel. Blast gun is fixed, but adjustable. Barrel can be rotated in range from 0 to 78 rpm. After blasting, barrel is manually rolled out of the cabinet and work is rinsed free of abrasive slurry at the machine. Armports and knee-actuated triggers are provided for manual operation. Made by **Cro-Plate Co.**, Dept. N, 747 Windsor St., Hartford 5, Conn.

▲ For more details circle NED-585 A4 on enclosed inquiry slip ▲

If you have a labeling problem ordinary labels can't solve...use

AVERY Kum-Kleen self-adhesive LABELS

...the tough ones are our specialty

...where other types of labels are found "wanting"...or when you need to substitute an attractive pressure-sensitive label for a costly nameplate... Avery Kum-Kleen labels are the *best* solution to your problem!

...and so are the other kind..

...where you want *faster* labeling... improved appearance...labels that won't pop, curl or peel...or those the housewife can remove without soaking or scraping...there's no substitute for an Avery Kum-Kleen label!

faster • easier • more economical

Patented Avery dispensers...manual or electric... feed die-cut *pressure-sensitive* labels off roller tape, ready to be LAID ON any clean, smooth surface. No moistening...no sticky fingers. Where can YOU use these labels in YOUR business? Write today for free samples, case histories and prices.

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Originators of Pressure-Sensitive Labels

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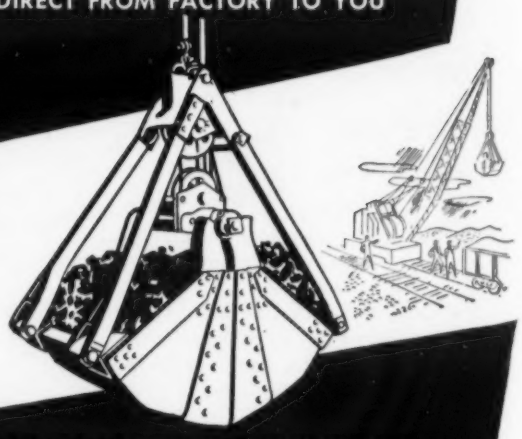
BROWNHOIST BUILDS

BETTER BUCKETS
—for less money

DIRECT FROM FACTORY TO YOU



ROPE-REEVE, POWER WHEEL AND LINK TYPE

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INDUSTRIAL BROWNHOIST CORPORATION
BAY CITY, MICHIGAN

146

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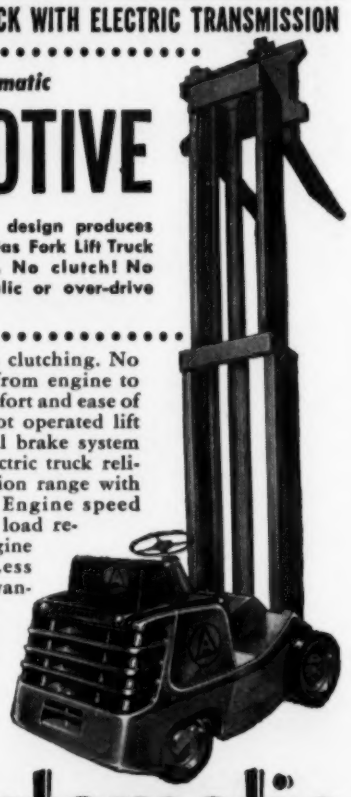
AMERICA'S FIRST GAS TRUCK WITH ELECTRIC TRANSMISSION

The new Automatic

DYNAMOTIVE



Entirely new engineering design produces America's first and only Gas Fork Lift Truck with *Electric Transmission*. No clutch! No gears to shift! No hydraulic or over-drive mechanism.

No engine shock due to clutching. No mechanical connection from engine to drive unit. Maximum comfort and ease of operation for driver. Foot operated lift and tilt. Interlocked dual brake system for maximum safety. Electric truck reliability. Infinite acceleration range with minimum power loss. Engine speed automatically adjusts to load requirement. Minimum engine wear—maximum life! Less fuel consumption. All advantages of torque converters and overdrive without mechanical devices. Minimum down time. Maximum accessibility. No aisle projections.

For further data on the new Dynamotive Truck, write:

Automatic®
61 W. 87th St., Dept. A4, Chicago 20, Ill.

WORLD'S LARGEST EXCLUSIVE BUILDER OF ELECTRIC DRIVEN INDUSTRIAL TRUCKS

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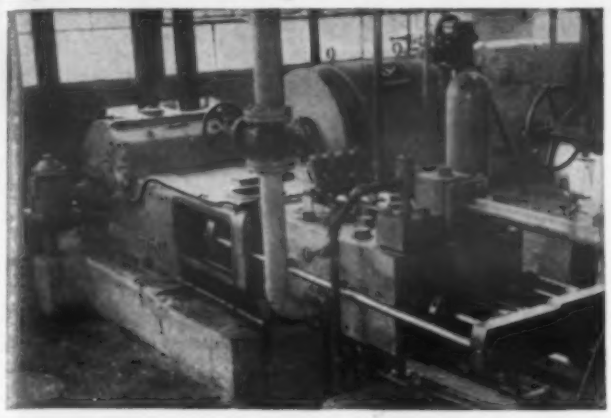

Worthington Power Pump Driven by Star-Kimble Squirrel-Cage Motor

This Worthington Horizontal Duplex Power Pump at the South Bend Plant, Oliver Corporation is driven by a Star-Kimble standard squirrel-cage motor. Star-Kimble also engineers and builds motors for special industrial requirements in all fields, including machine tool, marine, and materials handling.

For full information on standard squirrel-cage motors, write for Bulletin B-201. Inquiries are invited on special designs.

STAR-KIMBLE
MOTOR DIVISION OF
Miehle Printing Press and Mfg. Co.
214 Bloomfield Avenue Bloomfield, N. J.

▲ For more details circle **NED-589 A4** on enclosed inquiry slip ▲

MICRO Precision Switches

Install 9 MICRO switches to control 4-second gaging cycle

• Making plant equipment more automatic is the first step toward making its operation faster, safer and more productive.

Nine MICRO switches are installed here to control all the movements and timing of a gage built to check uniform profile and alignment of ammunition rounds.

The switches used in this application have die-cast enclosed housings and are protected against entrance of dust and dirt by a synthetic rubber boot. Roller arm actuators make perfect contact with the cams.

Full stocks of these and many other MICRO switches which plant superintendents, electricians and maintenance men have found invaluable for putting new life into present equipment, can be purchased from 174 Authorized Distributors in 154 key cities. Look under "Switches, Electric" in your phone book.

DO YOU READ MICRO TIPS? Ask to be put on our mailing list. It is crammed with practical ideas on how these switches are used to increase production.

MICRO SWITCH
A DIVISION OF MINNEAPOLIS-HONEYWELL REGULATOR COMPANY
FREEPORT, ILLINOIS

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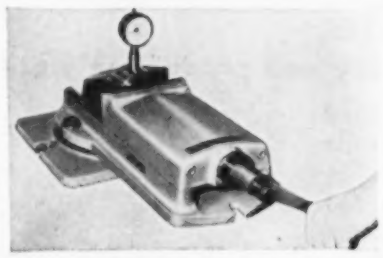
DOUBLE ROTATING JOINT handles pressures to 1500 psi

Double passage rotating joint handles fluids at up to 1500 psi. It can be used with both air and hydraulic fluids simultaneously, with members rotating in same or opposite directions as required. It is manufactured in ½ through 5-in. sizes. Among other applications it offers means of connection to double-acting rotating or oscillating air and hydraulic cylinders. Made by **Rotherm Engineering Co.**, 7280 W. Devon Ave., Chicago 31, Ill.

▲ For more details circle **NED-591 A4** on enclosed inquiry slip ▲

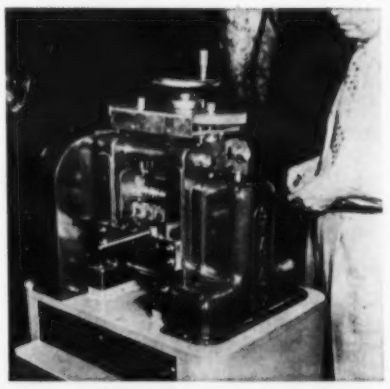
SELF-CONTAINED HYDRAULIC VISE applies up to 8750-lb holding force



Elements of a mechanical vise are combined with those of hydraulic power transmission in the Hilma-Hydrovise, a self-contained hydraulic vise which can apply up to 8750 lb holding force. When handle is turned clockwise, jaws close mechanically until clamped object is encountered. At this point, clutch is automatically activated and additional force is applied hydraulically. Once hydraulic system goes into operation, moveable jaw advances only 1/32-in. to prevent work from being crushed. Design is such that work is forced down when clamped and cannot rise as vise is tightened. With swivel base, vise measures 20¼ x 30¼ x 5⅛ in. Jaws are 2 x 6 9/32 in. with maximum opening of 5 in. Made by **American Tooling Corp.**, Dept. A, 60 E. 42nd St., New York 17, N. Y.

▲ For more details circle **NED-592 A4** on enclosed inquiry slip ▲

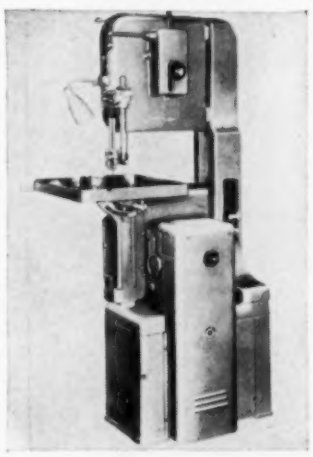
SMALL ROLLING MILLS for tube reducing and sizing



Accurate and rapid tube reducing and sizing are possible with a modification of the Stanat small wire rolling mills. Among the specific operations which can be performed are the processing of tubular heating units to a desired size. Series W mill has a roll size of 3-in. diameter by 5-in. face width and series 200 unit has a 4 x 6-in. roll size. Housings are of type GM Meehanite. Smaller machine has completely enclosed heavy bronze bearings, while large unit has bronze or roller bearings and can be arranged for water cooling. Made by **Stanat Mfg. Co.**, 47-30 37th St., Long Island City 1, N. Y.

▲ For more details circle **NED-593 A4** on enclosed inquiry slip ▲

16-IN. BANDSAW speed range is 50-4500 sfpm



Variable speed 16-in. band saw has speed range from 50 to 4500 sfpm which is hand wheel controlled. Speed changes are made while machine is running. Saw can be used on all types of ferrous and nonferrous metals, plastics, wood and composition. Capacity is 8 in. under guide and 16 in. from frame to blade. Table tilts 45 degrees to right and 5 degrees to left. Motor is spring mounted in base. Other features include quick-change tires and blade supports at contact point. Made by **Kearney & Trecker Corp.**, Walker-Turner Div., 129 Berkman St., Plainfield, N. J.

▲ For more details circle **NED-594 A4** on enclosed inquiry slip ▲

PUSH...PULL 75% FASTER 90% EASIER

WITH THE CENTER HOLE OTC

50 TON HYDRAULIC PULLER

Removes or installs bearings, gears, pinions, shafts, studs, wheels, pulleys, etc.—75% faster and 90% easier. This new OTC 50 ton ram is completely portable (weighs only 45 lbs.)—has remote control pump—interchangeable ram heads—and can be used as a production holding fixture. Also available in 17½ and 30 ton sizes. *Booklet describes complete line and uses of OTC equipment.*

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OWATONNA TOOL COMPANY
436 CEDAR STREET • OWATONNA, MINN.

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READ ALL ABOUT THE LATEST IN AIR GAGING

JUST OFF THE PRESS, this book contains up-to-the-minute, complete specifications for the Dimensionair. Explains the important advantages of the new balanced air system. Also tells about our new air gage accessories—the Arnold Air Grinding Gage, Air Electric Switch, and Air Gaging Electronic Controls. Here is a fund of the latest authoritative reference data on the Air Gage, developed by Federal during many years' study of actual shop use requirements and engineering research. Ask for your copy today. Federal Products Corp., 1171 Eddy Street, Providence 1, Rhode Island.

FEDERAL
Largest manufacturer of indicating type gages . . . exclusively

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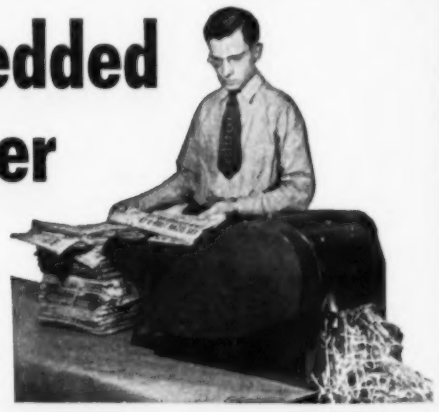
Shredded Paper



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(1) Real dollar & cents savings
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(4) Dependable supply

Test a "Silver" paper shredder in your own shop without obligation—Get complete details by writing *today* to:

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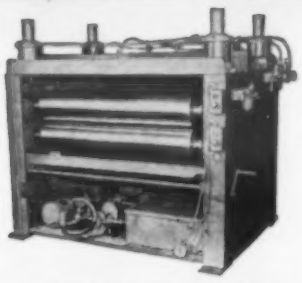
UNION AUTOMATIC COMPOUND SPREADERS

SAVE *8 WAYS



1 "Die life increased 75%."
2 "Production increased 20%."
3 "Compound saving of 16%."
4 "Rejects reduced 10%."
5 "One helper eliminated."
6 "Paid for itself in 54 days."
7 "Able to use salvage stock for some operations."
8 "25,000 more pieces before changing dies."

MODELS TO FIT ANY STOCK UP TO 96" WIDTH

Union is the foremost designer and manufacturer of roller coating machines for application of drawing or stamping compounds and protective coatings.

Models may be equipped with hardened steel, or with neoprene-covered rolls—also with heated or cooled rolls—to meet your individual requirements.

*The above claims are based on actual statements by users, both large and small—a number of whom have ordered a second and third machine.
Complete data and agent's name on request. Union will design and/or manufacture coating machines to meet your specific requirements.

UNION TOOL CORP.
318 E. MARKET ST., WARSAW, IND., U.S.A.

USERS SAY UNION CUTS COSTS, SPEEDS PRODUCTION

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Shopman in Tube Art plant inserts Du Pont Explosive Rivet in drilled hole . . . touches Rivet head with electrically heated riveting iron. Almost instantly, shank expands, forming a smooth, barrel-shaped head at shop end of Rivet, locking it securely in place.

Seattle display firm cuts fastening time 40% with DU PONT EXPLOSIVE RIVETS

In their search for a quicker, neater method of fastening—Tube Art Displays, Inc., Seattle, Wash., tried Du Pont Industrial Explosive Rivets on a typical fastening job. More than satisfied with the results, they're now using these Rivets on many types of display signs. The fastener formerly used required time-consuming work . . . caused dimpling in the metal . . . and frequently rusted, streaking the signs. But Explosive Rivets did away with these problems . . . enabled the firm to cut fastening time a full 40% . . . eliminated dimpling and streaking. By using these fasteners (brass for steel assemblies, and 52S aluminum on porcelain-faced signs), they now produce smarter displays—faster.

Fastening's an easy, one-man job with Explosive Rivets. You work *only* from head side of Rivet . . . no bucking bar needed. And these fasteners won't warp metal or damage the finish . . . important where neat results are essential.

Du Pont Industrial Explosive Rivets are saving time, labor and money for many kinds of industries. Why not put these cost cutters to work for you? For full details on types, sizes and materials, contact your nearest Du Pont Refinish Service Warehouse, or write: E. I. du Pont de Nemours & Co. (Inc.), Explosives Dept., Wilmington 98, Delaware.

DU PONT *Hi-Speed* INDUSTRIAL EXPLOSIVE RIVETS
A Product of Du Pont Explosives Research

DU PONT Better Things for Better Living . . . through Chemistry

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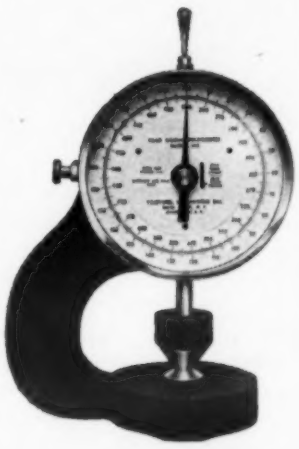
CONVEYOR CHAIN
has ultimate strength of 37,500 lb

Drop forged Duraflex 2½-in. pitch conveyor chain has ultimate strength of 37,500 lb and can be flexed both up and down and right and left. It can turn in a radius as small as 30 in. and can be assembled and disassembled without tools. Open construction with smooth working surfaces lends itself to ready cleaning by water or steam jets. Made by **Jervis B. Webb Co.**, 8933 Alpine Ave., Detroit 4, Mich.

▲ For more details circle NED-600 A4 on enclosed inquiry slip ▲

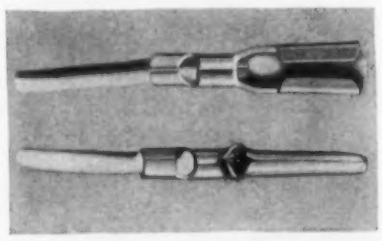
DIAL MICROMETER
for laboratory and production work



Design to meet exacting laboratory requirements yet sturdy enough for production use, model 553 micrometer has 6-in. dial measuring to 0.5 in. in increments of 0.001 in. Screw-type zero adjustment is provided. Instrument has cast iron base and stainless steel anvils. Standard dead weight load is 8 psi. It is also available with different dead weights and anvil sizes, and can be made to conform to ASTM and other specifications. Made by **Testing Machines, Inc.**, 125 W. 64th St., New York, N. Y.

▲ For more details circle NED-601 A4 on enclosed inquiry slip ▲

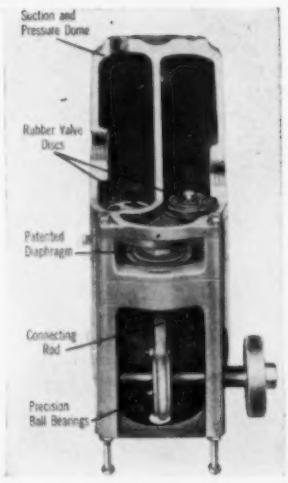
MINIATURE ELECTRICAL CONNECTORS
give close-spaced rapid connection



Crimp type Taper Pin and Taper Tab miniature electrical connectors and receptacles permit very close spacing of termination without danger of short circuits. They were primarily designed for electronic and communications fields, but are now available for general use wherever many connections have to be made and space is limited. Security against vibration permits use as AN connectors in aircraft. Connectors are tandem mounted in strip form and wound in reels for rapid automatic application. Special tool produces a carefully controlled precision crimp uniform over long runs. Made by **Aircraft-Marine Products, Inc.**, 2100 Paxton St., Harrisburg, Pa.

▲ For more details circle NED-602 A4 on enclosed inquiry slip ▲

DIAPHRAGM PUMP
250, 350 and 450 gph capacities



Chemical and ceramic fluids, metallurgical slurries, filter feeds, filter aids, fluids with high crystalline content, food products and pharmaceuticals can be pumped by this diaphragm pump. Design of pump for difficult-to-handle materials eliminates wearing parts, there being no contact between pumping mechanism and fluid handled. Compact unit is made in 250, 350 and 450 gph capacities for total suction lifts to 25 ft. Included are pump, two-pole automatic pressure switch, motor and belt drive mounted on steel base. Gasoline engine can replace electric motor. Made by **W. S. Rockwell Co.**, 216 Eliot St., Fairfield, Conn.

▲ For more details circle NED-603 A4 on enclosed inquiry slip ▲

AIR-COOLED POWER CIRCUIT TRANSFORMER
Steps Down High Voltage

Universal Voltage Ratio Design Provides 3 Combinations—460/230—230/115—460/115

Modern, efficient power distribution practice calls for high voltage main circuits stepped down to low voltage where needed for lighting, control equipment, small tools, etc. The Jefferson line of Power Circuit Transformers is particularly advantageous for these reasons: (1) Transformers are of the universal voltage ratio design making it possible to meet nearly every requirement with a minimum number of transformers in stock. (2) These transformers are of the small compact "Dry Type" needing no special vaults. In addition, these transformers can be mounted on walls, posts, or directly on machinery with sturdy universal mounting brackets. Stock capacities 50 to 15,000 V.A. Approved by Underwriters' Laboratories, Inc.

Bulletin 501-15 mailed on request to manufacturer—JEFFERSON ELECTRIC COMPANY, Bellwood, Illinois.
Advt.

▲ For more details circle NED-604 A4 on enclosed inquiry slip ▲

ONE MAN CAN SAFELY, EASILY HANDLE 1000 LB. DRUMS

This Thomas No. 90 Safety Drum Truck makes handling of drums and barrels a cinch for one man. Trucker never touches barrel—loading and unloading is automatic. Sliding 2-in-1 hook fits all wooden and metal barrels, cradles drum securely so it can't roll off. Order one on a "return if not pleased" basis.

Send for Free Catalog

THOMAS TRUCK & CASTER CO.
463 Mississippi River, Keokuk, Iowa

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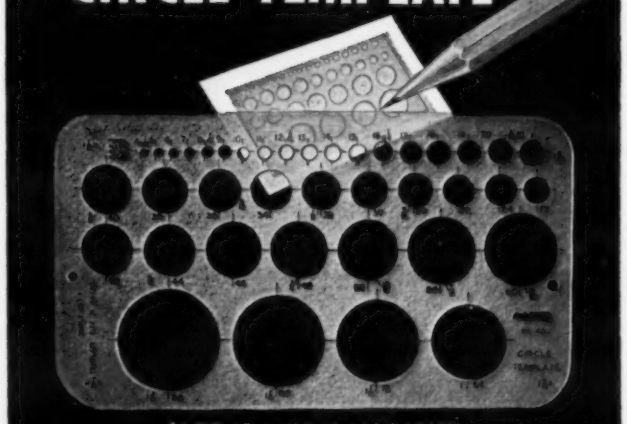
Another Arm-The NO. 40
CIRCLE TEMPLATE



$1.00 AT YOUR LOCAL DEALER

.030 MATTE FINISH MATHEMATICAL QUALITY DOUBLE-CURED PLASTIC.
ALL HOLES SMOOTH-MILLED TO ENGRAVING MACHINE ACCURACY.

ONE OF MORE THAN 30 RAPIDESIGN TIME-SAVER TEMPLATES—ALL OF WHICH ARE BETTER MADE, MORE USEFUL AND LESSER PRICED.

CATALOGUE NO. 49 AVAILABLE UPON REQUEST

RAPIDESIGN INC.
P. O. BOX 592 GLENDALE, CALIF.

▲ For more details circle NED-606 A4 on enclosed inquiry slip ▲

FOR UNEXPECTED PROFITS in your shop

ask yourself these questions:

● Could you increase your productivity and profits by fast rearrangement of machines to meet new production needs with "down time" all but eliminated? ● Could you benefit by speed in leveling certain types of machines? ● In precision machining operations, such as grinding, do you ever find that rejects are traceable to vibration? ● Would you like to forget about lagging machines to the floor to keep them from walking? ● Would your worker productivity increase if you could reduce plant noise?

. . . then let us do something about the answers.

The NEW Leveling Barrymount can make profits for you out of problems you may have thought couldn't be solved. It represents a wholly new idea in mounting machinery. What it can mean to you in immediate profits is described in this new bulletin.

Write TODAY for your free copy of "LOOK—NO LAGGING!" to The Barry Corporation, 752 Pleasant Street, Watertown 72, Mass. *Adv.*

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Noisy Telephoning a Problem?

Solve It by Installing

BURGESS-MANNING

Acousti-Booths

- Walls of thick sound-absorbing material and patented construction reduce the loudness of noise by 50%* . . . leaving a zone of quiet.
- Doorless construction makes for a light, airy, well-ventilated booth . . . easy to keep clean.
- Low maintenance cost . . . Easy to move . . . Suited to any noisy location.

Model 602 Wall Model

Model 211 Floor Model

BURGESS-MANNING COMPANY

Architectural Products Division

** Results of studies by a prominent research organization. Report available for review. Write for Bulletin A124*

5970-C Northwest Highway, Chicago 31, Illinois

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feature for feature...

THIS NEW SQUARE D VOLTAGE TESTER *Tops them ALL!*

for further details, write Square D Company, 6060 Rivard Street, Detroit 11, Michigan

ASK YOUR ELECTRICAL DISTRIBUTOR FOR SQUARE D PRODUCTS

SQUARE D COMPANY

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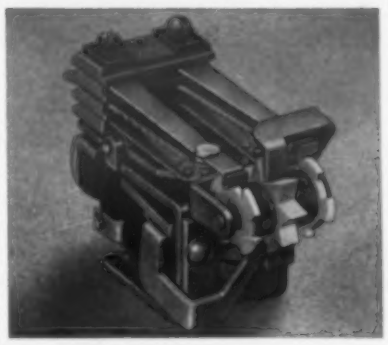
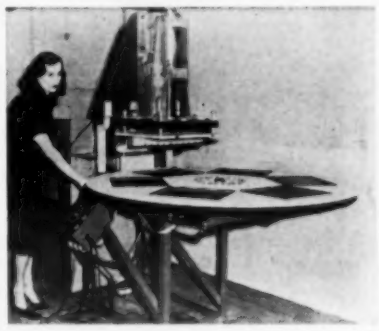
MIDGET SEQUENCE RELAY for predetermined cycle operation



Double-pole single or double-throw contacts of Frame 211 midget sequence relay can be set to open, close or transfer in any desired sequence, providing number of steps in complete cycle is divisible into six or eight. Double cam movement permits adjusting contacts to operate when coil is de-energized, when so specified. Cam rotates half step when coil is energized, and completes step when de-energized. Silver-contacts are rated at 5 amp ac, or 0.5-amp dc at 115 v. Commonly used continuous-duty coils have ratings to 115 v dc, or 230 v ac or 10 to 12 v ac. Made by **Struthers-Dunn, Inc.,** Dept. C, 150 N. Thirteenth St., Philadelphia 7, Pa.

▲ For more details circle **NED-610 A4** on enclosed inquiry slip ▲

AUTOMATIC TURNTABLE for plastic heat-sealing equipment

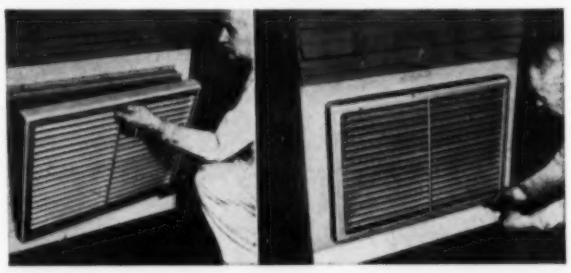


Indexing turntable makes possible automatic operation of Thermatron equipment for electronic heat sealing of vinyl plastics. Work fed by operator is automatically positioned under sealing electrode. Dwell and sealing period are controlled by an electric timer. Unit is fully interlocked with press and has selector for manual, semiautomatic or fully automatic operation. It is available in sizes up to 60 in. dimeter and is adjustable for 4, 6, 8, 12, and 24 indexes per revolution. A maximum of 30 operations per minute is possible. Made by **Radio Receptor Co.,** Thermatron Div., 251-A W. Nineteenth St., New York 11, N. Y.

▲ For more details circle **NED-611 A4** on enclosed inquiry slip ▲

ELECTRIC HEATING PANEL practical for heating small space

In addition to emitting radiant heat, this permanent type electric wall heater also creates flow of warm air. Unit attaches to or recesses into the wall, and is

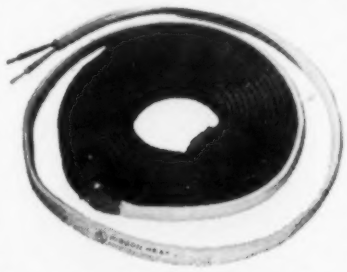


especially practical when heat is needed only in a small space such as gate house, cashiers booth, rest room or a special room. Heating element is buried inside asbestos composition heat panel. UL-approved heaters are offered in ratings of 750 and 1250 w for operation on 115 or 230 v. Special sizes and shapes can be made to order. Made by **ThermoRay Corp.,** Dept. NED, 141 E. 44th St., New York 17, N. Y.

▲ For more details circle **NED-612 A4** on enclosed inquiry slip ▲

ELECTRIC HEATING RIBBON available up to 120 ft long

Plastic and shockproof, Ribbon Tape electrical heating tape is available in lengths from 20 to 120 ft. It can be used to prevent water pipes from freezing in sprinkler or regular systems, to increase flow of viscous liquids in piping, for ice and snow removal and many other uses. Tape is UL approved, waterproof and unaffected by mild acids and alkalis. It is available for both 110 and 220-v lines and has a 7-watt per foot rating. Made by **Cox & Co.,** 16 E. 43rd St., New York 17, N. Y.



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GRIPPER WOVEN WIRE SLINGS!

TOUGH! You get the benefit of every ounce of sling strength in a basket hitch. Heat treated handles give extra strength. Transverse loop construction won't let sling body snap suddenly!

SAFE! Broad, flat sling body grips tightly around load in a choke hitch. Grips *entire* load securely, keeps inside members of tubing, rod or bar stock from slipping. Also, no broken wires stick out to cut operator's hands.

EASY TO USE! No kinking, tangling, snarling. Use any sling in either hitch. Use anywhere you have a stationary or portable hoist. Hangs out of the way when not in use.

SEE your industrial supply, materials handling or safety equipment dealer. Or write direct for name of nearest dealer and FREE ILLUSTRATED HANDBOOK.

The Cambridge Wire Cloth Co.

WIRE CLOTH | METAL CONVEYOR BELTS | SPECIAL METAL FABRICATIONS

Department R
Cambridge 1, Maryland

DEALERS! Write for information on territories available.

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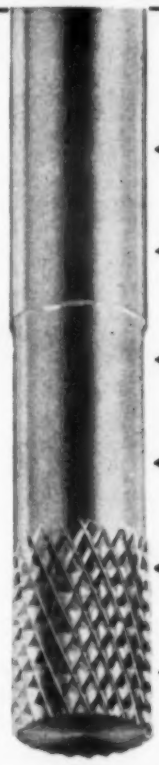

- *SOLID carbide for greater rigidity, increased accuracy*
- *Superior grade of carbide assures longer tool life*
- *Master-machined for greater concentricity, precision work*
- *Operates efficiently at grinding wheel speeds*
- *No down time for dressing — maintains size and shape*
- *Most efficient tool for small hole finishing*

Save 75% of internal grinding time with

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SOLID CARBIDE

Grinding Burs

Yes, in only one-fourth the production time required by use of mounted points, FORD solid carbide grinding burs will remove material hardened up to 68 RC. Save down time, tool cost. Ford carbide burs can be resharpened many times and still retain new-tool accuracy. Let us prove it. Write today.

FORD *-- the complete line!*

HSS ground cutters, rotary files and countersinks. CARBIDE cutters, end mills and grinding burs.

Get complete details plus operational data on over 300 Ford rotary tools in new Catalogue No. 207.

FORD regrinding service adds tool life, reduces tool costs!

M. A. FORD MFG. CO., INC.

Pioneers in rotary tools for more than 30 years

721 West River St., Davenport, Iowa

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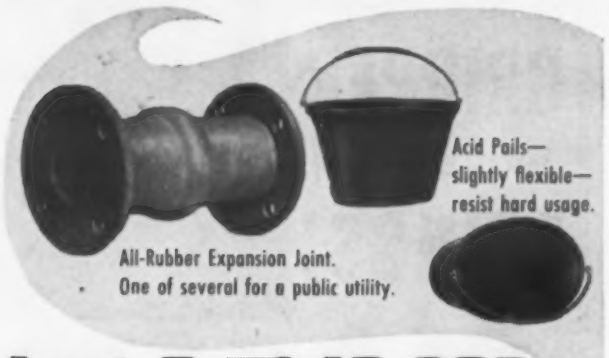

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Yes—ten thousand applications of La Favorite Rubber Engineering know-how in a year. This "know-how" is something a customer cannot feel or see, but which, is nevertheless, an ingredient in every La Favorite product—time and use have demonstrated its value.

With a backlog of more than half a century of experience, and the third generation of rubber experts now actively participating, you may be sure any rubber use problem of yours, simple or complex, submitted to us will receive the benefit of these outstanding advantages.

Use La Favorite's rubber engineering know-how to your advantage. Send for report #363—send blueprints for estimates on your work.

2110

LA FAVORITE RUBBER MFG. CO.
273 Wagaraw Road • Hawthorne, N. J.
RUBBER LININGS • RUBBER COVERING • RUBBER ENGINEERING

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Here is the Answer to your Friction, Wear, Abrasion and Corrosion Problems:

Electrolizing

prevents malfunctioning of assemblies ... increases part life 200% to 800%

Manufacturers of all types of products are specifying ELECTROLIZING to reduce friction and increase the wear, abrasion and corrosion resistance of metal parts.

Parts which have had their life increased 200% to 800% by ELECTROLIZING include fuel control components, gear trains, jack screws, pistons, seals, valves, shafts, solenoids, microswitch parts and hydraulic components.

A CASE IN POINT: The following are comments from a report compiled by the Engineering Department of a manufacturer* of oxygen regulator parts.

"Considerable difficulty has been experienced in obtaining a suitable corrosion resistant bearing surface on three parts used in the oxygen regulator release. Chrome and nickel plating were tried with no success.

"Six of each of the subject parts were submitted to The Electrolizing Corporation for processing. The parts were handled promptly and returned within a few days. Tests on these parts showed:

1. Surface finish of 5-8 and 7-9 micro-inches remained unchanged.
2. There was a uniform deposit all over the part of .00015".
3. Parts were installed in units and life tested.

"The Electrolized parts have improved the efficiency of the unit. Repetitive tests were conducted without failure of the treated arms. It is therefore recommended Electrolizing be specified on the drawing."

Whether your problem is friction, wear, abrasion or corrosion, ELECTROLIZING can provide the solution. Our staff engineers are available for consultation without obligation.

Write for new booklet describing ELECTROLIZING and its advantages.

*Name on request

THE Electrolizing CORPORATION
1505 EAST END AVENUE, CHICAGO HEIGHTS, ILLINOIS

Plants
Providence 1, R. I. 148 W. River St. — Cleveland 10, Ohio 1650 Collamer Rd. — Chicago Heights, Illinois 1505 East End Ave. — Los Angeles, Calif., 1406 East 15th St.

▲ For more details circle **NED-617 A4** on enclosed inquiry slip ▲

V-BELT SHEAVES
lightweight, have B grooves

Line of lightweight two, three and four-groove type BP V-belt sheaves have B grooves and are available with pitch diameters from 7 to 18.4 in. Bore range is from ½ to 1¾ in. by 1/16-in. increments. Sheaves are designed for the Browning malleable split taper bushing. Though of lower cost than the standard line, they have equivalent strength, quality and finish. Made by **Browning Mfg. Co.,** 1940 Browning Dr., Maysville, Ky.

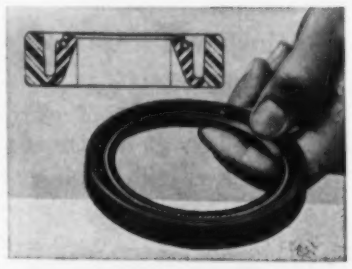
▲ For more details circle **NED-618 A4** on enclosed inquiry slip ▲

CABLE TERMINAL
speeds complex circuit assembly

Color-coded grounding sheath connector makes possible rapid and accurate assembly of shielded wire and cable terminations in electronic and other circuitry by unskilled personnel. Two tubular sleeves fit one inside the other, sandwiching the braided shielding at the end of the cable and a grounding wire between them. Tool then compresses this assembly to form a positive connection between braid and ground lead. Connector is available in seven bright colors for ready size identification, in a range to accommodate cable diameters from 0.058 to 0.297-in. It allows the inner conductor to remain free on the installed fitting and can be used without materially affecting electrical characteristics of coaxial cable where shield is at ground potential. Special terminal tongues in variety of shapes and bolt hole sizes can be substituted for grounding wire. Made by **Thomas & Betts Co.,** 24 Butler St., Elizabeth 1, N. J.

▲ For more details circle **NED-619 A4** on enclosed inquiry slip ▲

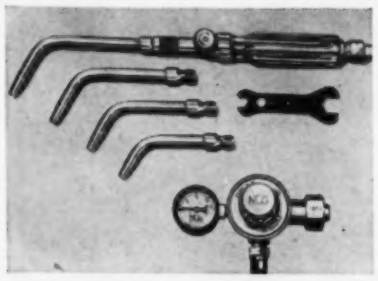
MOLDED OIL SEALS
design gives performance advantages



Molded LPD Clipper shaft oil seals incorporate several design features which give efficiency and durability. Seal lip contacts shaft in a thin line round its circumference, resulting in minimum seal wear, low frictional heat and drag. It is retained both by large hinge area and a garter spring, enabling it to accommodate minor shaft runout and eccentricities. Seals have composition heel which is a press fit in the bearing cavity and readily conforms to slight irregularities in this cavity. They can be removed and replaced without damage. Reinforced heels and different compositions are available for wide range of service conditions and temperatures. Made by **Johns-Manville,** Box 60, 22 East 40th St., New York 16, N. Y.

▲ For more details circle **NED-620 A4** on enclosed inquiry slip ▲

BRAZING KIT
with torch, tips, hose and regulator

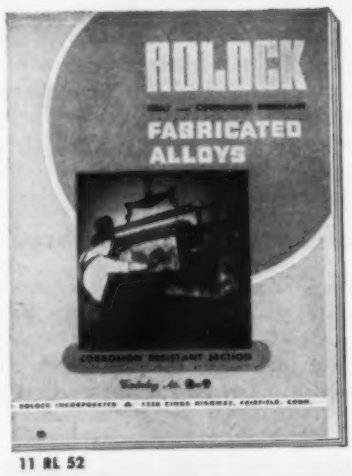


Consisting of torch, tips, hose and adjustable regulator, Sod-R-Braze air-acetylene brazing maintenance kit can be used for brazing with silver or copper alloys, soldering and heating. It is suitable for use with sheet metal, steel piping, copper tubing, electrical apparatus, automotive and electrical equipment. Used with a 40-cu ft acetylene cylinder, it is easily portable. Torch has grooved plastic handle, leakproof valve and is equipped with pilot light. Flame selector and on-off valve are conveniently located for operation by thumb of hand holding the torch. Made by **National Cylinder Gas Co.,** 846 N. Michigan Ave., Chicago 11, Ill.

▲ For more details circle **NED-621 A4** on enclosed inquiry slip ▲

ROLOCK
HEAT AND CORROSION RESISTANT
FABRICATED ALLOYS

NEW and COMPLETE...



11 RL 52

specialized reference on Pickling, Degreasing, Galvanizing and other processing operations. Baskets, Manual and Motor-powered Barrels . . . Trunnion, Centrifugal, Bottom-dumping Baskets, Shell Case containers.

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Send for this No. B-9 Corrosion Resistant Section of Rolock's catalog... just off the press. It's full of valuable ideas.

ROLOCK, INC.
1412 KINGS HIGHWAY, FAIRFIELD, CONN.

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SHEEHAN
METAL MESH BELT
CONVEYORS
for FORGING and STAMPING PRESSES

Features:

PRESS CONVEYORS:
• No belt slippage due to heat expansion • Oils . . . greases are beneficial, not harmful to operation

FORGING CONVEYORS:
• Hot forgings do not affect belt movement • 6½ inch under-press clearance—no cumbersome chutes necessary

SHEEHAN Conveyors easily convert to scrap handling • Sheet Metal Scrap • Flashings • Turnings

YOUR PROBLEMS! —— May we analyze your conveyor problems? Complete engineering "Know How" available. Sheehan Conveyor users have saved thousands of dollars in floor space, material handling and manpower. There's a SHEEHAN Conveyor for most industrial use.

R. T. SHEEHAN CO.
8072 N. Territorial Rd. • Plymouth, Michigan

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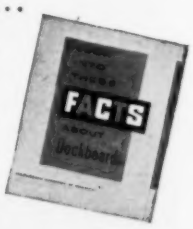
DO YOU WANT THE FULL, MONEY-SAVING *Facts* ABOUT DOCKBOARDS?

THIS NEW FACTS FILE GIVES THEM TO YOU...

The new Magcoa Facts File is full of facts like these that you ought to have before you invest in a bridgeplate for your loading dock—
- The actual costs of dangerous makeshift plates
- What other companies learned . . . *the hard way*
- Why sixty multi-plant national companies standardized on Magcoa Dockboards
- What your local Magcoa Representative knows about *your* dock

The new Magcoa *Facts File* is based on a study of what smart buyers demand (and get); gives you tips on *net* costs; talks in dollars and cents, specific facts . . . from your viewpoint. Write today for your free copy.



MAGNESIUM COMPANY OF AMERICA
MATERIALS HANDLING DIV. • EAST CHICAGO 6, IND.

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THE *Workhorse* OF SMALL GRINDERS

Aro Short Grinder Model 7149, 17,000 R.P.M.

ARO does it *faster* . . . at *lower cost!* That's why Rohr Aircraft at San Diego —and hundreds of other progressive plants today — prefer ARO. Complete line grinders for jet engines . . . also heavy duty vertical and horizontal grinders of all types. Write for new catalog 60. The Aro Equipment Corp., Bryan, Ohio.
Aro Equipment of Canada, Ltd., Toronto, Ont.

ARO AIR TOOLS

Also . . LUBRICATING EQUIPMENT . . HYDRAULIC EQUIPMENT . . AIRCRAFT PRODUCTS . . GREASE FITTINGS

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BEARING LIFE EXTENDED 1,013 HRS.

with NEW

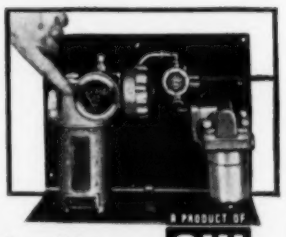
ALEMITE OIL-MIST

AUTOMATIC LUBRICATION SYSTEM

BEFORE Oil-Mist: Spindle bearings on a grinder at a leading manufacturing company* were able to operate only 100 hours without replacement. Replacement cost of a complete spindle was $90, or $18 for new bearing replacements. *Plus* 3 hours down time. *Plus* labor costs.

AFTER Oil-Mist: The same grinder has been running 1,113 hours—*and the spindle is operating as satisfactorily as if new bearings had just been installed.* After deducting the cost of Oil-Mist plus installation, this one unit has shown a savings of over $600!

what is... OIL-MIST?



A PRODUCT OF SW STEWART-WARNER

It is a new, unbelievably simple lubrication system that atomizes oil into mist and distributes it through tubing to bearings. Oil-Mist bathes all bearing surfaces with fresh, clean, cool oil film. Uniformly maintains oil film on plain and anti-friction bearings, gears and chains regardless of variations in load, temperature or speed! No "peaks and valleys" of lubrication.

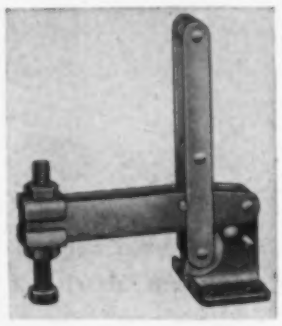
Fully automatic, Oil-Mist eliminates waste and the uncertainties of the "human element." Extends bearing life as much as 17½ times. Seals bearings against dirt and abrasives. Cuts oil consumption as much as 90%. Greatly reduces the number of oils needed.

Get the facts NOW!

Just out! This new catalogue brings *you* the complete story on Oil-Mist. Specifications, models, typical applications, actual case histories. Get yours now. Write Alemite Division of Stewart-Warner, Dept. NED14, 1850 Diversey Parkway, Chicago 14, Illinois
*Name on request

▲ For more details circle NED-626 A4 on enclosed inquiry slip ▲

MIDGET CLAMP
two models exert 100-lb pressure



Model V-100 midget clamp, similar in design and performance to larger models in the Knu-Vise line, has a vertical handle and horizontal mounting surface. It has a clamping force of 100 lb with spindle located at the end of the toggle bar. Model S-100 for side mounting also has a clamping force of 100 lb. Templates of either model are available on request in full, half or quarter size. Made by **Lapeer Mfg. Co.,** 3058 Davison Rd., Lapeer, Mich.

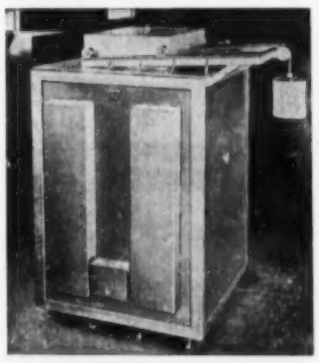
▲ For more details circle NED-627 A4 on enclosed inquiry slip ▲

TOOL DRESSING PACKAGE
has equipment for all operations

All of the forging, heat treating and dressing equipment required to dress cutting and chipping tools up to 2 in. square properly are found in this Tool Dressing Package. Included are a Nazel electropneumatic forging hammer, a self-contained unit which requires no mechanical adjustment and which is made by this company; a Black & Decker 8-in. heavy duty ball bearing bench grinder; and accessory tools and tool steel furnished by Bedford Tool & Forge Co. Products of Eclipse Fuel Engineering Co. included are a model 1010E circular salt bath furnace, rectangular welded steel tank and model EA pot furnace for tempering with low temperature drawing salts. Capacity of packaged unit is 150 tools per hour. Package offered by **Lobdell United Co.,** Wilmington 99, Del.

▲ For more details circle NED-628 A4 on enclosed inquiry slip ▲

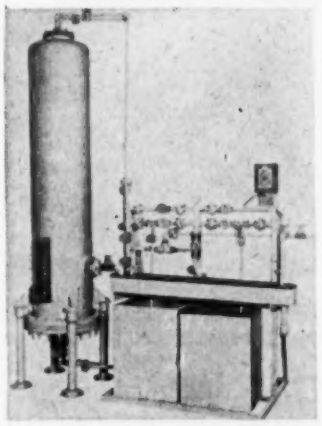
TOP-LOADING FURNACE
provides close control to 2500° F



Designated model PT-02550, pit furnace is of the top-loading type and provides close temperature control over its range up to 2500° F. Firing chamber is 18-in. wide, 25-in. deep and 42-in. high, giving a capacity of 18,900 cu in. Lid is ball bearing mounted side-sliding unit counterbalanced for easy action, designed for loading from either hoist or conveyor. Any standard temperature control can be ordered, and facilities for panel mounting are provided. Voltage regulating 36-tap magnetic contactor power controls are fitted. Unit is available with or without atmospheric controls for oxidation conditions. Made by **Pereny Equipment Co.,** Chambers & Pereco Rds., Columbus 12, O.

▲ For more details circle NED-629 A4 on enclosed inquiry slip ▲

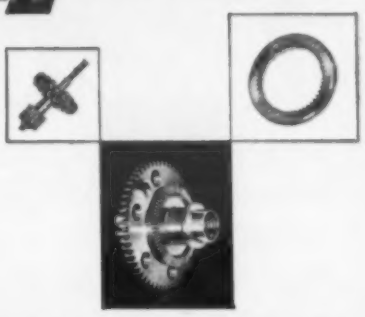
WATER DEMINERALIZERS
capacities range from 50 to 2500 gph



Mixed bed water demineralizers operate on the ion - exchange principle and have capacities ranging from 50 to 2500 gph of mineral-free water. They feature an improved system for regenerating the purifying resins after they become exhausted. Units remove such impurities as sodium, potassium, carbonates and other mineral salts, including silica, carbon dioxide and other weakly ionizable impurities. This results in effluent water with high electrical resistance, often up to 20,000,000 ohms per cubic centimeter. Made by **Barnstead Still & Sterilizer Co.,** 103 Lanesville Terrace, Forest Hills, Boston 31, Mass.

▲ For more details circle NED-630 A4 on enclosed inquiry slip ▲

RYNEL PRECISION GEARS



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Instrument
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Match Performance With Custom Service

Rynel precision gear performance in fine pitch motion applications is matched only by its custom executive-type air service.

You can leave your plant, inspect Rynel facilities, check precision specifications, consult on design problems, and return to your office —all in the same day, as a result of Rynel's new concept of customer service and supply.

Be sure of dependable service on your fine-pitch quality gear requirements. Send prints to Rynel engineers for estimates or design suggestions.

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New Concepts In Fine Pitch Gear Supply.

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If your cost of reclaiming materials is too high Spencer Vacuum can probably give you the answer. It not only picks up the valuable metals or dusts but conveys them to a closed container at any point in the plant. Gold, babbitt, enamel dusts, solder, welding flux (see illustration) and foundry sand are reclaimed by the ton every day. The same Spencer unit will clean your floors and do a dozen other disagreeable and expensive jobs. Ask for Bulletin No. 144.

with SPENCER VACUUM

THE SPENCER TURBINE COMPANY • HARTFORD 6, CONNECTICUT
SPENCER HARTFORD
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REG. U. S. PAT. OFF.
Kleenslot
WEDGE-WIRE
PREPARATION SCREENS
FOR DEWATERING, SIZING AND SCREENING OPERATIONS

The chemical, food and general industries can't afford to overlook this product. Accurate openings, great strength, long life and economy makes WEDGE-WIRE Preparation and Vibrator Screens and Screen-Guards "front line" products.

Cross section at left shows how KLEENSLOT Screens operate on a non-clogging principle.

SEND THIS COUPON TODAY! • DON'T DELAY

WEDGE WIRE CORP.
5604 Clark Ave., Cleveland 2, Ohio
Gentlemen:
Please send us literature outlining the superiority of Wedge Wire construction.
COMPANY _____
NAME _____
ADDRESS _____

Wedge-Wire CORPORATION
5604 CLARK AVE. CLEVELAND 2, OHIO

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▲ For more details circle NED-634 A4 on enclosed inquiry slip ▲

NEW 16" Band Saw with speeds 50 to 4500 SFM

another Walker-Turner
LIGHT-HEAVYWEIGHT
to Knock Down Equipment Costs

Now, Walker-Turner brings you another *Light-Heavyweight* champ . . . another opportunity to reduce equipment costs. It's a 16" Band Saw with all the quality and efficiency features you want . . . with all the capacity and durability you need for a wide range of jobs, metal, plastic or wood. And, at a PRICE MUCH LOWER than you have ever known for any comparable machine!

Your factory-trained Walker-Turner distributor is ready to tell you about: —

*

*Quick-change Variable Speed Drive. As easily as dialing a radio, you turn the hand wheel and change blade speed *smoothly*, while machine runs. No need to change belts, pulleys. Speed shows on a graduated scale.

And Improved Saw Guides, Carter Jiffy Tires, extra weight, available accessories. GET ALL THE FACTS. Just phone local Walker-Turner Distributor or send coupon.

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walker-turner DIVISION
KEARNEY AND TRECKER CORPORATION
PLAINFIELD, N. J.

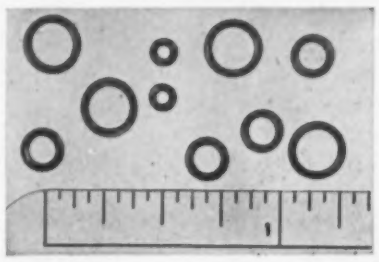
SOLD ONLY THROUGH *TRAINED* INDUSTRIAL DISTRIBUTORS

DRILL PRESSES — Hand and Power Feed • RADIAL DRILLS • Wood and Metal Cutting BAND SAWS • TILTING ARBOR SAWS • RADIAL SAWS • JIG SAWS • LATHES • SPINDLE SHAPERS • JOINTERS • BELT AND DISC SURFACERS • FLEXIBLE SHAFT MACHINES

Use this space
to send for full details and specifications.
Walker-Turner Division, Kearney & Trecker Corp.
Dept. N-1, Plainfield, N. J.

▲ For more details circle NED-635 A4 on enclosed inquiry slip ▲

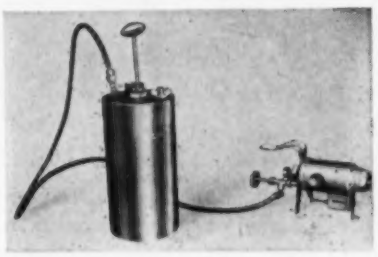
CLOSE-TOLERANCE O-RINGS
elastomeric, for pressure sealing



Designed originally to meet precise space requirements of aviation equipment, close-tolerance subminiature elastomeric O-rings are now available for industrial use. Stock sizes are 0.029 x 0.040 x 0.109-in., 0.070 x 0.040 x 0.150-in. and 0.1 x 0.7 x 0.24-in. for moving or non-moving seals. Rings have wide range of pressure, temperature and movement. They seal in both directions of pressure flow. They are durable and have low running friction. Made by **Stillman Rubber Co.**, Dept. D, 5811 Marilyn Ave., Culver City, Calif.

▲ For more details circle NED-636 A4 on enclosed inquiry slip ▲

MULTI-USE BLOW TORCH
preheats its own combustion air

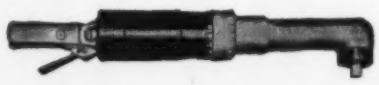


Preheating its own combustion air makes possible operation of this Super-Jet blow torch at temperatures as low as −70° F. Separate ½-gal cylindrical fuel tank which operates under 45 psi holds a 50-minute supply, weighs only 6½ lb and has its own supporting stand, manual air pump and pressure gage. Fuel-jet cleanout plunger clears jet while torch is operating, without danger of fire. Blow torch will supply 75,000 Btu per hour to warm up air-cooled engines, remove paint, thaw out pipes and tanks, heat several soldering irons simultaneously, or deliver personnel heat when used with secondary heat exchanger. Made by **Perfection Stove Co.**, 7890-A Platt Ave., Cleveland 4, O.

▲ For more details circle NED-637 A4 on enclosed inquiry slip ▲

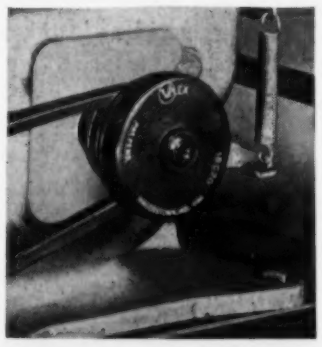
AIR TOOLS
for drilling and nut setting

Applications from ¼-in. drilling to ¾-in. bolt size nut setting can be performed by three new series of air tools. First of No. 3 series features a basic air motor which powers four straight drills (which are convertible to direct-drive nut setters), four right angle drills and four right-angle nut setters. Speed range is from 3400 to 800 rpm and capacities are ¼, 5/16 and ⅜-in. No. 35 series has three grip-handle drills with speeds of 1150, 800 and 550 rpm and capacities of ⅜ and 7/16-in. Conversion can be made to direct-drive nut setters with 5/16-in. thread size capacity. In the No. 5 series, right angle nut setters are offered in speeds of 600, 450, 300 and 225 rpm for setting nuts of ½, ⅝ and ¾-in. thread size. Made by **Thor Power Tool Co.**, 175 N. State St., Aurora, Ill.



▲ For more details circle NED-638 A4 on enclosed inquiry slip ▲

AUTOMATIC PULLEY CLUTCH
pitch controlled by throttle setting



Designed for use on gasoline engines to power mowers, tractors, elevators, pumps and similar equipment, 1-in. shaft size model 18020 V-Plex automatic pulley-type clutch is controlled by throttle setting. Unit is engaged automatically as throttle of engine is opened, and as shaft speed increases, it also increases driving belt pitch diameter. Engagement speed ranges from 1800 to 2500 rpm depending on belt load, and disengagement is at 1200 rpm. Unit is actuated by centrifugal force and has high starting torque, automatically tightening the belt as the throttle is opened. It is self-contained, installed simply by placing on engine shaft and locking with a set-screw and uses a type B V-belt. Made by **Light Inspection Car Works**, V-Plex Clutch Div., Dept. NED, Hagerstown, Ind.

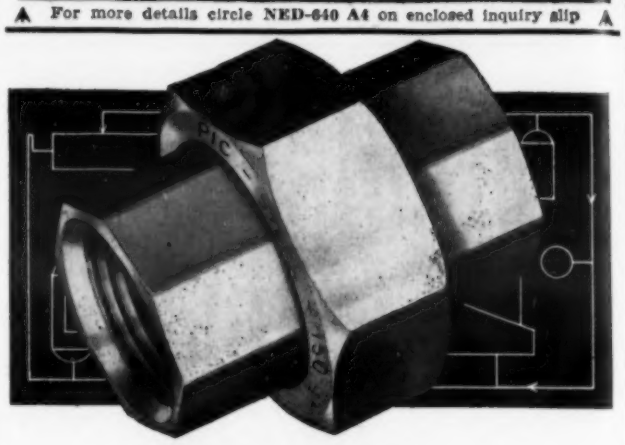
▲ For more details circle NED-639 A4 on enclosed inquiry slip ▲

VARIABLE SPEEDS
Just turn a dial to get any rpm. Motor, speed changer and gear train all housed in one unit. ¼ to 50 h.p.

REQUEST VARIDRIVE BULLETIN

U.S. VARIDRIVE
THE MIRACLE MOTOR
U.S. ELECTRICAL MOTORS Inc.
Los Angeles 54, California (Box 2058) Milford, Connecticut

▲ For more details circle NED-640 A4 on enclosed inquiry slip ▲



Pics fit your new
Equipment PICture!

Yes, their eye-catching brightness and strength make these 150 lb. steel unions the choice for original equipment. They go on fast, too, because ends are uniformly flat-sided to accommodate open end wrenches. You can't hurt the steel pipe coupling stock either. Special wedge-type bronze seat for tight seal. Complete zinc plating, even on threads combats rust. Pics cost *less* than a galvanized, *no more* than a black malleable union.

Write for Samples
DART UNION COMPANY
132 THURBERS AVENUE, PROVIDENCE 5, R. I.

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hydro-line cylinders series "J"

conform to J. I. C. standards
RUGGED . . .
Where it counts most!

CARTRIDGE . . . metallic rod-wiper, packing, bushing in one unit.
RUGGED BODY . . . all steel end caps and barrel.
PISTON RINGS . . . step-cut joint, long life, minimum leakage.
PRESSURE . . . 2,000 psi heavy-duty . . . 3,000 psi non-shock.
SIMPLICITY . . . no tie-rods . . . no retainer rings.

hydro-line *Manufacturing Co.*
5601 PIKE ROAD • ROCKFORD, ILLINOIS

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Bulletin 800 Push Buttons

- Standard, heavy duty, or oiltight enclosures
- Hundreds of types and combinations

Double-break, silver-alloy contacts in these rugged push button stations insure long service without failure. An almost endless variety of combinations makes them adaptable to every need. Special buttons, pilot lights, selector switches, etc., available in the same housings to meet your specific needs. Allen-Bradley Co., 1334 S. Second St., Milwaukee 4, Wis.

ALLEN-BRADLEY
QUALITY
MOTOR CONTROL

For more details circle NED-643 A4 on enclosed inquiry slip

...for long life and low cost

specify

CAL-WIC MESH CLOTH

You'll find CAL-WIC Mesh Cloth available in a wide variety of weaves, weights and meshes... fabricated in various types of metals and alloys for resistance to corrosion, abrasion, or high temperatures.

For original equipment or replacement, investigate the advantage of "precision-made" CAL-WIC Mesh Cloth. Write for further information.

THE COLORADO FUEL AND IRON CORPORATION — Denver and Oakland
WICKWIRE SPENCER STEEL DIVISION — Atlanta • Boston • Buffalo
Chicago • Detroit • New Orleans • New York • Philadelphia

CAL-WIC
INDUSTRIAL SCREENS
THE COLORADO FUEL AND IRON CORPORATION

For more details circle NED-644 A4 on enclosed inquiry slip

use COFFING Quik-Lifts

for tough-spot dependability

Pick out the tough spots on your production line... key spots where a breakdown means a costly shutdown. Then find out how the Coffing Quik-Lift's dependability really pays off. This hoist is a full-fledged production unit, built to stand up under hard assembly-line use. Its "tough spot" performance will soon repay its cost many times over in down time saved. So do as many others have done. Start the Quik-Lift on a hoist assignment where others have failed — then standardize on Coffing after it has proved its value the hard way.

For more information on Quik-Lift Electric Hoists, write for Bulletin X1E.

SOLD BY DISTRIBUTORS EVERYWHERE

Hoist-Alls • Safety-Pull Ratchet Lever Hoists • Mighty-Midget Pullers • Spur-Gear Hoists • Differential Chain Hoists • Load Binders • I-Beam Trolleys.

COFFING HOIST COMPANY
DANVILLE, ILLINOIS

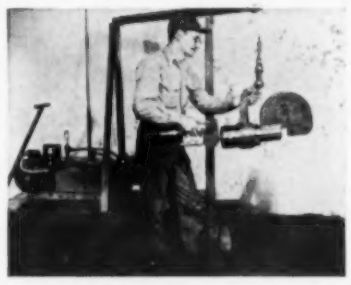
For more details circle NED-645 A4 on enclosed inquiry slip

TIME DELAY RELAY is lightweight, hermetically sealed

Now usable in industrial control devices which operate in wet, corrosive, dusty or explosive atmospheres, type SF Agastat time delay relay was originally developed for aircraft. Lightweight, hermetically-sealed unit is unaffected by freezing temperatures and resists vibration, shock and acceleration. Solenoid-operated and pneumatically-controlled, relay has housing 2⅛ in. square by 4 in. high and weighs only 1.2 lb. Time delay is adjustable from outside over range from 30 milliseconds to more than 1 minute. Made for 24-28 v dc, relay will also be available for other standard ac and dc voltages. It has double-break contacts in single, double and three-pole models. Made by **Elastic Stop Nut Corp. of America,** AGA Div., 1020 Newark Ave., Elizabeth 3, N. J.

For more details circle NED-646 A4 on enclosed inquiry slip

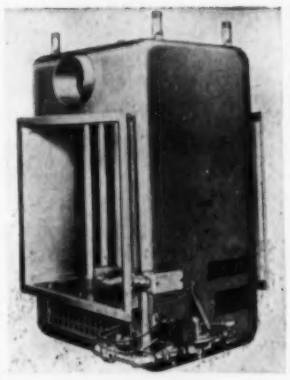
HYDRAULIC GUILLOTINE cuts 1¼-in. diameter steel rod



Designed for use in cutting and trimming coiled rod stock, draw bench cutting, test cutting piping and cutting cobbles in aluminum mills, model 21 hydraulic Guillotine supplies 50 tons cutting thrust from a 2-hp electrical motor and pump. It will cut a 1¼-in. steel rod in 3½ seconds and will also cut aluminum rod up to 1⅝-in. diameter. Unit can be obtained dolly-mounted for mobility with cutting head suspended by a spring tension balancer. Manual control lever actuates the unit. Made by **Manco Mfg. Co.,** Washington St., Bradley, Ill.

For more details circle NED-647 A4 on enclosed inquiry slip

GAS-FIRED DUCT HEATERS 65,000-500,000 Btu/hr capacities



Twelve models make up line of gas-fired duct heaters ranging in input capacity from 65,000 to 500,000 Btu per hour. They are designed to burn all types of gas. Units are used for air heating and tempering where air is circulated by an independent blower, especially when used in conjunction with air conditioning systems. Variation in the speed of this remote fan does not affect burner operation. Rectangular duct flanges for inlet and outlet connections are provided, and a built-in draft diverter permits unit to be installed 6 in. from ceiling or walls. Burner can be wired either to operate in conjunction with the remote blower or for thermostat control. Made by **United States Air Conditioning Corp.,** 3316 Como Ave. S.E., Minneapolis 14, Minn.

For more details circle NED-648 A4 on enclosed inquiry slip

TRACTOR SHOVELS capacities from 15 cu ft to 2¼ cu yd

Illustrated is a 1⅝-cu yd capacity tractor shovel, typical of a line now being produced in six models ranging in capacity from 15 cu ft to 2¼ cu yd. Unit shown has four-wheel drive with rear wheel steering. Other models in range have various combinations of two and four-wheel drive and bucket or rear wheel steering. All are provided with a torque converter transmission with 3:1 multiplication factor, supplemented by a manually engaged overdrive which permits top speeds of up to 28 mph. Steering boosters are standard on all models. Made by **Clark Equipment Co.,** Buchanan, Mich.

For more details circle NED-649 A4 on enclosed inquiry slip

NEW! ALL STICHT HAND TACHOMETERS now equipped with IMPROVED SLIP COUPLING OVERSPEED PROTECTION DEVICE

...TO PREVENT DAMAGE BY ACCIDENTAL OVERSPEEDING ON A WRONG RANGE

Available Ranges:

TYPE "UO", 5-RANGE TYPE
CATALOG NO. 303, 30-12,000 RPM
CATALOG NO. 314, 45-18,000 RPM
CATALOG NO. 322, 60-24,000 RPM
CATALOG NO. 346, 120-48,000 RPM
BULLETIN NO. 751

TYPE "UY", 3-RANGE TYPE
CATALOG NO. 630, 25-30,000 RPM
CATALOG NO. 640, 30-40,000 RPM
BULLETIN NO. 756

HERMAN H. STICHT CO., INC. 27 PARK PLACE, NEW YORK 7, N. Y.

For more details circle NED-650 A4 on enclosed inquiry slip

Left— Union Special Style 20100 H Bag Closing Machine

Here's how to close **MULTIWALL PAPER BAGS**

FOR lower production costs ...stronger, neater closures ...ability to get out rush orders in a hurry, you can't beat Union Special Bag Closing Machines! Specially built to stand up under heavy production schedules, these machines provide the high output rates needed to meet modern competitive conditions.

In the Union Special line, it's easy to find the right unit to meet your particular requirements. ASK FOR RECOMMENDATIONS.

SEND FOR THIS BULLETIN!

Get your copy of this 16 page illustrated bulletin containing helpful data and charts on the complete Union Special line of bag closing machines. UNION SPECIAL MACHINE CO., 416 North Franklin Street, Chicago 10, Illinois

UNION SPECIAL

For more details circle NED-651 A4 on enclosed inquiry slip

standardize on standard

HALLOWELL SOLID STEEL COLLARS

now size-marked for easy identification

42 stock sizes—each marked with shaft diameter for easy identification—are now available at your HALLOWELL distributors'. And these precision machined solid steel collars—in sizes from 3/16" to 3" inclusive—have the famous self-locking UNBRAKO Socket Set Screw to assure positive positioning on the shaft.

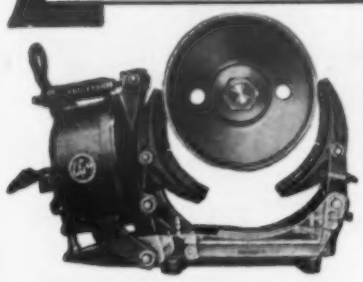
Write for literature and the name of your nearest HALLOWELL distributor. STANDARD PRESSED STEEL Co., Jenkintown 24, Pa.

HALLOWELL POWER TRANSMISSION DIVISION

SPS JENKINTOWN PENNSYLVANIA

For more details circle NED-652 A4 on enclosed inquiry slip

LONG LIFE BRAKES FOR A-C and D-C MOTORS by EC&M



Type WB Brake showing how the motor armature is easily lifted out. At top left is the handle-nut for compressing the spring when removing motor armature, changing brake shoes and for manual control.

The brake lining is molded to match curvature of wheel and shoe.

These Type WB Brakes have a thick, tough block type lining.

The blocks have proper frictional quality **throughout the entire thickness,** permitting uniform and complete wear down to rivet heads. Brake adjustments are infrequent.

Built in several sizes. Supplied with series or shunt-wound operating coils for direct current motors. On a.c. service, they are supplied in shunt-wound form for use with a compact rectifier-unit. Send for Bulletins 1004 and 1006.

THE ELECTRIC CONTROLLER & MFG. CO.
2698 EAST 79th STREET • CLEVELAND 4, OHIO

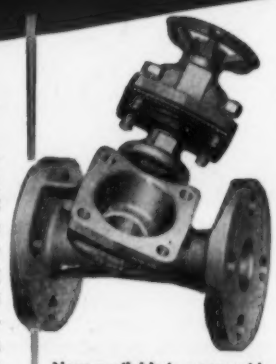
For more details circle NED-653 A4 on enclosed inquiry slip

SAFE CONTROL for hard-to-handle fluids

CRANE PACKLESS DIAPHRAGM VALVES

Advanced design, plus Crane Quality throughout, makes Crane Packless Diaphragm Valves your safest buy for hard-to-handle fluids. The diaphragm serves one function only—sealing the bonnet. The seating member is a separate unit. That's how Crane provides positive shut-off, even in case of diaphragm failure. Crane design also gives you longer diaphragm life . . . easy operation . . . simplified maintenance at lowest upkeep cost.

Check your Crane No. 53 Catalog, or ask your Crane Representative.



New available in a new wide choice of body, disc insert and diaphragm materials—in unlined or lined patterns. Working pressures—up to 150 pounds, water, air, oil, or gas, 180° F. maximum temperature depending on valve size, material, and service.

CRANE VALVES

CRANE CO., *General Offices:* 836 S. Michigan Ave., Chicago 5, Illinois
Branches and Wholesalers Serving All Industrial Areas

VALVES • FITTINGS • PIPE • PLUMBING • HEATING

For more details circle NED-654 A4 on enclosed inquiry slip

NEW SBS WATERLESS WASHSTATION*

"brings the washroom to the worker"*
for only $52.50 per unit
(F.O.B. Saginaw, Mich.
Towel Dispensers not included)

SBS Waterless Washstations are complete units for hand washing on the job. Because they dispense SBS-30 Waterless Skin Cleanser, these Washstations require no plumbing . . . SBS-30 is simply rubbed on the hands and wiped off along with all the soil.

SBS Waterless Washstations —

- **In Trouble Spots** — Avoids workers use of irritating, harmful solvents. Quickly and safely removes tars, greases, paints, varnishes and other hard-to-remove soils.
- **On the Production Line** — Cuts to a minimum costly interruptions for hand washing.
- **Actually Earn You Money** — By eliminating one unnecessary trip per day for hand washing by only 10 men, you can save up to $720 annually.

Fill out and mail the coupon below for complete information about SBS Waterless Washstations and our 30-day no-risk money back trial offer.

*Trademark 92-A

SUGAR BEET PRODUCTS CO., Dept. 7F, SAGINAW, MICHIGAN
Sirs: Please send me full information about the new SBS Waterless Washstation and your 30 day no-risk money back trial offer.
NAME_____
TITLE_____
COMPANY_____
CITY_____ ZONE_____ STATE_____

SUGAR BEET PRODUCTS CO. • Saginaw, Mich.
Chemical By-Products Division

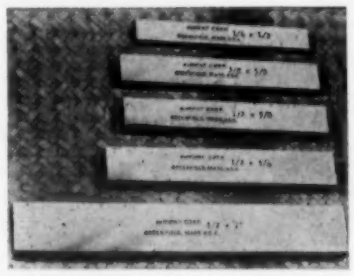
For more details circle NED-655 A4 on enclosed inquiry slip

SMALL BENCH PRESS delivers 5 tons of pressure

Connection of model 500 Pnu-draulic air-oil bench press to a 100-lb air line enables it to deliver 5 tons of pressure. Bantam-size unit weighs 300 lb and is suited for staking, riveting, forming, piercing, crimping, sealing, broaching, trimming, marking and flanging. It requires 11/3 sq ft of bench space and has a welded steel frame. Pressure range is upward from 100 lb. Press is equipped with an automatic timer for cycle control and dwell time at the bottom of the stroke which is adjustable from 0 to 3 in. If parts are not placed accurately in the press die, high pressure will not "kick in." Two-handed press trip is provided. Made by **Alliance Mfg. Co.,** Dept. BP, Alliance, O.

For more details circle NED-656 A4 on enclosed inquiry slip

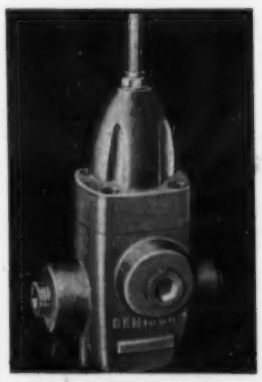
GROUND TOOL BITS are rectangular in shape



Standard range of Super high speed rectangular ground tool bits is made of same balanced carbon and vanadium steel as present line of square bits. Tools are heat treated to attain hardness of Rockwell 66 to 68 C. They are ground to close tolerances without carburization. Made by **du Mont Corp.,** 38 Beacon St., Greenfield, Mass.

For more details circle NED-657 A4 on enclosed inquiry slip

SEQUENCE VALVE of direct operating type



Interlocked hydraulic operations can be controlled by line of direct operating sequence valves, suitable for circuits with from 25 to 2000 psi. When system pressure reaches the pressure setting of the valve, it diverts oil to the secondary circuit, thus bringing about close synchronization of primary and secondary operations. Any number of the valves can be used in a system, either in series or parallel. They are supplied in threaded body style in ½, ¾ and 1¼-in. sizes, subplate type in ¾ and 1¼ in. and flange body in the 1½-in. size. Pressure ranges are 25-125, 75-250, 125-500, 250-1000 and 1000-2000 psi. Made by **Denison Engineering Co.,** Control Div., 1152 Dublin Rd., Columbus 16, O.

For more details circle NED-658 A4 on enclosed inquiry slip

TELEVISION CAMERA is compact closed-circuit unit

Small closed-circuit TV camera, model 50-A, measures 4¼ in. wide x 6⅛ in. high x 9⅛ in long. It weighs just 7½ lb and requires only two controls in addition

to the on-off switch. Small number of components provide for minimum maintenance, and simple design results in little operator training being required. Unit has remote electrical and optical controls, remote pan and tilt and an auxiliary sound unit. Made by **Dage Electronics Corp.,** 65 N. Second St., Beech Grove, Ind.

For more details circle NED-659 A4 on enclosed inquiry slip

COLLAPSIBLE BOX RINGS ON PALLETS

FLEXIBLE IN USE . . . FLEXIBLE IN CAPACITY

Here is a Pallet with Pallet Rings designed by Brusco to give maximum flexibility for a wide variety of material handling needs.

1. One or more Pallet Rings can be set on the Pallet to form a sturdy parts box for storing or handling production parts.
2. Rings are collapsible for simplified return shipping and storing.
3. Pallet can be used individually or in conjunction with Pallet Rings.
4. Fabricated in sizes and gauges to meet your specifications.

No. 580

No. 585

Write Brummeler today for complete information

Brusco HANDLING EQUIPMENT
BRUMMELER STEEL PRODUCTS CORPORATION
1411 Ionia Ave. S. W., Grand Rapids, Michigan

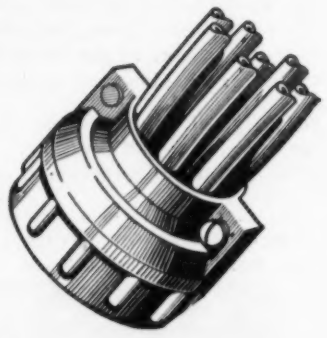
For more details circle NED-660 A4 on enclosed inquiry slip

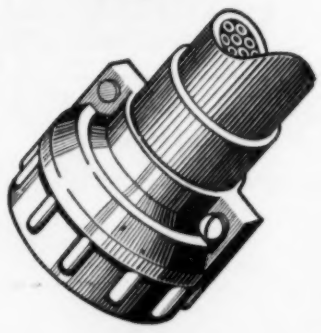
Bendix Builds a Better *cable clamp* the AN3057B

Inexpensive Efficient Versatile

Outstanding Features

- Neoprene gland.
- Centered clamping action.
- Increased close down.
- Positive grounding feature.
- Cadmium plated die-cast aluminum nut.
- Shorter over-all length.
- Waterproofs multi-conductor cable.
- Immediate delivery.





The new Bendix AN approved AN3057B cable clamp is now available. Engineered by Bendix to the highest quality standards, this cable clamp offers major design improvements. The clamping action is radial and completely eliminates wire strain and chafing by holding the wire bundle firmly in rubber. This clamp will accommodate a wide range of wire bundle sizes, but an even greater range can be handled through the use of the Bendix AN3420A accessory telescoping sleeve.

The new AN3057B cable clamp will also waterproof multi-conductor rubber covered cable on the rear of a connector, or where moisture-proof entrance through a bulkhead or into an equipment box is required.

This versatile clamp is a product of the Scintilla Magneto Division of Bendix Aviation Corporation and is a companion AN accessory to the world famous Bendix Scinflex line of electrical connectors. Write our Sales Department for details.

Bendix
SCINTILLA DIVISION of Bendix AVIATION CORPORATION
SIDNEY, NEW YORK

FACTORY BRANCH OFFICES: 117 E. Providencia Ave., Burbank, Calif. • 582 Market Street, San Francisco 4, California • Stephenson Bldg., 6560 Cass Ave., Detroit 2, Michigan • 512 West Avenue, Jenkintown, Pa. • Brouwer Bldg., 176 W. Wisconsin Avenue, Milwaukee, Wisconsin. EXPORT SALES: Bendix International Division, 205 East 42nd St., New York 17, N. Y.

For more details circle NED-661 A4 on enclosed inquiry slip

AMERICAN MONORAIL

Free Moving Cranes

MANUAL-ELECTRIC

American MonoRail cranes offer all the advantages of lightness, easy movement, strength, live load capacity, interlocking and safety devices for loads up to 5 tons. Cranes are available for manual or power operation controlled from cab or floor.

SEND FOR BULLETIN C-1

THE AMERICAN MONORAIL CO.

13116 ATHENS AVENUE • CLEVELAND 7, OHIO

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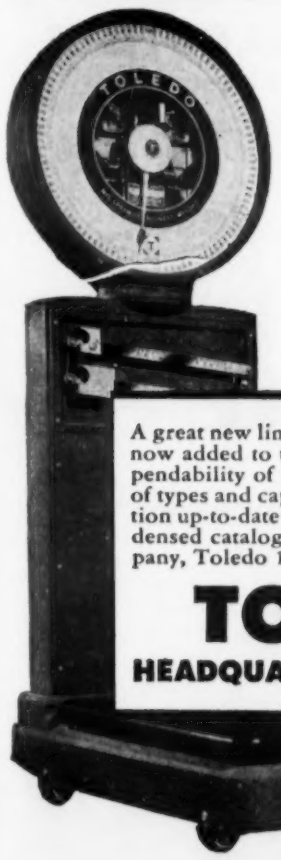


new

44 Ways Better

A great new line of Toledos! *44 new features* are now added to the traditional accuracy and dependability of Toledo Scales. Complete range of types and capacities. Get your scale information up-to-date . . . write today for the new condensed catalog No. 2001. Toledo Scale Company, Toledo 1, Ohio.

TOLEDO®

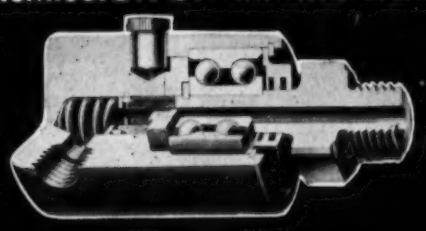
HEADQUARTERS FOR SCALES

Model 2181 —New version of the world's most widely used portable dial scale.

▲ For more details circle **NED-663 A4** on enclosed inquiry slip ▲

FAWICK ROTORSEAL

PROVIDES TROUBLE-FREE TRANSMISSION OF AIR AND LIQUIDS



If your machine problem requires the transmission of air or liquids from stationary to rotating machine members, a FAWICK ROTORSEAL will provide the trouble-free, practical answer.

Precision-made ROTORSEALS are available in either single or multiple passage units, producing an absolute sealing of air, liquids, or gases under pressure. They are equally effective in vacuum applications. Thousands of installations have proved the high efficiency of FAWICK ROTORSEALS.

FAWICK AIRFLEX DIVISION
FEDERAL FAWICK CORPORATION
9919 CLINTON ROAD
CLEVELAND 11, OHIO

Write for ROTORSEAL Bulletin ML-6.

FAWICK Airflex

INDUSTRIAL CLUTCHES AND BRAKES

▲ For more details circle **NED-664 A4** on enclosed inquiry slip ▲

BAR STOCK RACK
for one-man stock handling

Designed so that one operator with hoist can pick up and stack heavy unwieldy bar stock, tubing and miscellaneous structural shapes neatly and safely, this bar stock rack is available in various capacities to fit any need. It is of heavy-duty structural steel construction, and also conserves floor space and speeds inventory taking and stock selection. Made by **Jarke Mfg. Co.,** 5403 N. Broadway, Chicago 40, Ill.

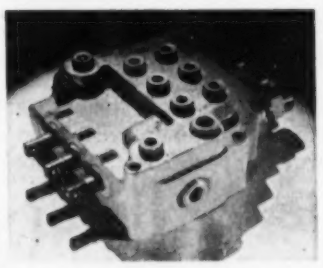
▲ For more details circle **NED-665 A4** on enclosed inquiry slip ▲

REPLACEMENT BRUSH
for floor scrubbing machines

Improvements made in the Shower-Feed brush for Hild model C or UC floor scrubbing machines make it possible to replace worn bristles. Brush is made in two parts, a permanent aluminum brush back to which is attached a wood-back refill block. Latter is changed in 5 minutes or less when bristles are worn. Bristle types available are palmetto, bassine, mixed palmetto and bassine, steel wire, mixed steel wire and bassine and nylon. Made by **Hild Floor Machine Co.,** Dept. NE, 740 W. Washington Blvd., Chicago 6, Ill.

▲ For more details circle **NED-666 A4** on enclosed inquiry slip ▲

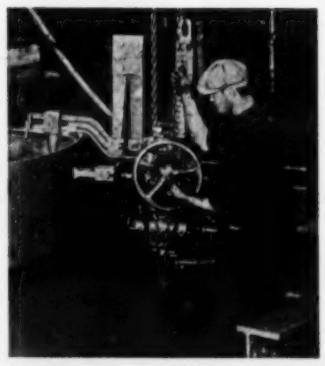
DIRECTIONAL CONTROL VALVES
for hydraulic circuit applications



Spool groove on series of directional control valves for mobile equipment is coined straight down in a V-slot, permitting accurate control and smooth metering action. There is full metering in all spool porting. Valve is made in four sizes to allow flow of 8, 16, 23 or 35 gpm. Models include 1, 2, 3 and 4-spool types. Single and double acting spools are interchangeable. In the smaller sizes, device can control pressures up to 2500 psi. Design allows flow characteristics to be tailored to user's needs, and full parallel circuit permits precise travel control in more than one direction. It is adaptable to simultaneous rotation, fork clamping, side shifting and up-ending operations. Made by **Parker Appliance Co.,** Dept. NE, 17325 Euclid Ave., Cleveland 12, O.

▲ For more details circle **NED-667 A4** on enclosed inquiry slip ▲

PORTABLE DRILLING MACHINE
for large unwieldy work



Portable Artos beam and girder drilling machine is designed for large unwieldy work, is operated by pushbutton and automatically drills holes up to 2 in. diameter at right angles to the work surface. It is suspended from a crane or other overhead structure. Holes are located by centerpunching, operator positions the drill head and then pushes a button which clamps the drill to the work and starts the automatic drilling cycle. Cradle mounted drill head can be set for vertical or horizontal drilling, and is counterbalanced. Two styles of automatic clamp are available. If desired, machine operation can be manual. Drill speeds are variable between 175 and 500 rpm, feeds per revolution between 0.005 and 0.020-in., and maximum work thickness is 6 in. Made by **Artos Engineering Co.,** 2751 S. 28th St., Milwaukee 46, Wis.

▲ For more details circle **NED-668 A4** on enclosed inquiry slip ▲

Circo Vapor Degreasers use 30% less solvent

CIRCO CROSS ROD DEGREASER

New, modern Circo vapor degreasers — whether large or small — are engineered to save on solvent consumption. Construction features like balanced condensing coils, leak-proof pumps and dual vapor-level control are today saving companies 30% and often more in solvent use. Circo degreasers perform faster, save precious man-hours through engineering designs developed through 30 years experience in vapor degreasing.

Circo Introduces Ultrasonic Cleaning

Write for details on the most modern, talked about metal cleaning development of the century—the Circosonic degreaser that cleans small metal parts by the power of sound.

Send for Circo's comprehensive 32-page Manual on Vapor Degreasing. No Obligation.

SINCE CIRCO 1923

EQUIPMENT COMPANY

126 Central Avenue, Clark (Rahway), New Jersey — Offices in Principal Cities

PER-SOLV (Perchlorethylene) CIRCO-SOLV (Trichlorethylene)

Vapor Degreasers • Metal Parts Washers • Dryers • Solvent Recovery Stills

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CUTS DUPLICATING COSTS!

COPIES ANYTHING WRITTEN, PRINTED, TYPED OR DRAWN ON TO PAPER MASTERS

IN 3 MINUTES!

Engineering drawings, forms, letters, bulletins, charts, reports, graphs, manuals, government regulations or anything written, typed, drawn or printed, can be reproduced with *photographic accuracy* in about 3 minutes on to an offset paper master for run off of multiple copies on an offset duplicator. Original copy may be enlarged, reduced or reproduced same size by xerography in XeroX Lith-Master copying equipment. With xerography, copies can be made from one or both sides of original material.

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There is no limit to the versatility of the dry, electrostatic, direct positive xerography process in paperwork duplicating applications, whether it's an involved production order writing system, parts or directory list, or government directive. Xerography eliminates re-typing, proofreading and errors.

Send for "proof of performance" folders showing how xerography is saving time and thousands of dollars for hundreds of companies in cutting duplicating costs.

THE HALOID COMPANY

54-58X HALOID ST., ROCHESTER 3, N. Y.

CANADA—The Haloid Company of Canada, Ltd., Toronto 2, Ont.

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THE FASTEST, CHEAPEST, MOST VERSATILE WAY TO MAKE MASTERS FOR DUPLICATING.

XEROX

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NEW TO INDUSTRY "UNITED" BURRING MACHINE

Deburrs • Grinds • Contour-Polishes

INSIDE-OUTSIDE SURFACES *at the Bench!*

SINGLE OR DOUBLE ARMS ADJUST CLOCKWISE TO 12 DIFFERENT OPERATING POSITIONS

BELT SIZE 42" x 1"

Faster, cheaper, better than hand filing. United gets into corners, angles, follows curves and irregular surfaces. Works inside openings over 1¾".

Backing platen cushioned with webbing to save wear on abrasive belts. Idler pulley (Approx. 1¼" diam.) is rubber covered to use as contact wheel. Uses any abrasive. Five models, 1/3 or ½ H.P., A.C. 110 V. —1750 and 3450 R.P.M.

Money-saving Machine for Aluminum Die Casts, Metal Parts, Steel, Plastics, Wood, Molded Rubber—For tool and die work, pattern making, precision finishing and similar uses.

FOR PRICES AND SPECIFICATIONS WRITE FOR FOLDER NO. 54

United Machine Tool Co.

1930 Nelson St., S.E. Grand Rapids 7, Mich.

For more details circle NED-671 A4 on enclosed inquiry slip

→ *because*

ALUMINUM PAINT LASTS

Painted only three times since erection in 1929, this 160-foot brick-lined steel stack proves the long-life, money-saving qualities of aluminum paint. Now freshly painted for the first time since 1940, seven men were able to complete the job in nine hours. *This* proves the great hiding power and application ease that you'll find in every can of aluminum paint.

Alcoa does not make paint. But we do make the Alcoa Aluminum Pigments that go into the best brands. Together with our paint manufacturing customers, we've developed aluminum paints that lick industrial paint problems—heat, cold, dirt, moisture, smoke, corrosion and fumes.

If *you* have a smokestack, tank, roof, boiler or other facility that needs the best protection, you should investigate aluminum paint. Write to Alcoa today for information.

ALCOA ALUMINUM

ALUMINUM COMPANY OF AMERICA

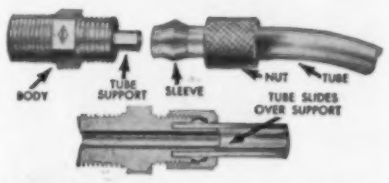
FREE BOOKLET tells how to paint with aluminum.

Aluminum Company of America, Paint Service Bureau
1788-A Alcoa Building, Pittsburgh 19, Pa.
Please send your free book, *Painting with Aluminum*. I plan to paint_____
Name_____
Company_____
Address_____
City_____ Zone____ State____

For more details circle NED-672 A4 on enclosed inquiry slip

PLASTIC TUBING FITTINGS are easily finger tightened

Compression type Poly-Flo fittings for connecting polyethylene and other plastic tubing are easily and rapidly installed and can be tightened by fingers only.

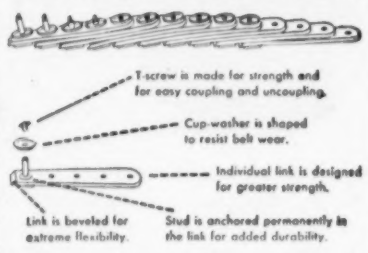


Fittings consist of a brass body with integral tube support, brass nut and polyethylene sleeve. They can be supplied in stainless steel for use with Teflon or other tubing. Two sizes are available, ¼ and ⅜-in. OD, with others to be in production shortly. Unions, half unions, elbows, tees and bulkhead unions are made. Joints will hold burst pressures of 0.040 or 0.062-in. polyethylene tubing and are recommended for working pressures up to 125 psi in small size and 100 psi in large size and temperatures from −90 to 175° F. Made by **Imperial Brass Mfg. Co.**, 510 S. Racine Ave., Chicago 7, Ill.

For more details circle NED-673 A4 on enclosed inquiry slip

ADJUSTABLE V-BELTS built-up type is easy to couple

Designed for D and E drives, Veelos adjustable v-belt has an exceedingly flexible built-up construction and is easy to couple and uncouple. It is made from plies of treated high-tensile strength canvas duck, joined by riveted studs with removable cup washers and T-screws. This construction provides strength and durability because of its flexible cool-running character. Belt is available in rubber coated style for standard service and in an oilproof type for oily and high-temperature drives. Made by **Manheim Mfg. & Belting Co.**, Manheim, Pa.



For more details circle NED-674 A4 on enclosed inquiry slip

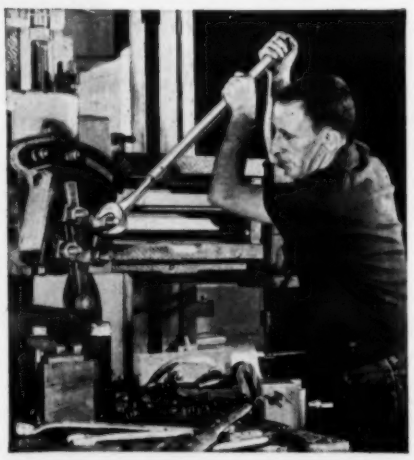
SAFETY SPECTACLES arch bridge is reinforced

Reinforced arch bridge, spot-welded to rigid nickel silver frame, is feature which doubles life of these safety spectacles. Temples are plastic covered cable with flat front portion to assure spring action. Each of the three nose bridge sizes, 21, 23 and 25 m/m, is made in three styles: 4100, without side shields; 4102, with wire screen side shields; and the 4103, with green acetate side shields. In addition to clear hardened lenses, latter style is offered with Sel-Green hardened lens. Clear lenses are 47 m/m (45 x 48) drop oval, either 1.25 or 6.00 D. hardened. Made by **Sellstrom Mfg. Co.**, 654 N. Aberdeen St., Chicago 22, Ill.

For more details circle NED-675 A4 on enclosed inquiry slip

OPEN END WRENCHES with detachable tubular handles

Ten wrenches with a size range of ⅞ to 1½ in. comprise line of heavy duty open end tools for use with detachable tubular handles. Three different length handles, which fit two or more sizes of wrench, can be used with the entire series. Tools are designed for heavy nut turning and have a spring-mounted locking button which fits into a hold in the handle to lock them together. Heads of wrenches are set at a 15-degree angle to the handle. Tubular handles can also be used with straight and offset type Boxockets. Made by **Snap-on Tools Corp.**, Dept. NED, 8028 28th Ave., Kenosha, Wis.



For more details circle NED-676 A4 on enclosed inquiry slip

CUT YOUR SWEEPING COSTS 75%

WILSHIRE POWER SWEEPERS

Free DEMONSTRATION PROVES IT

You can actually save the price of a WILSHIRE Power Sweeper in less than 6 months . . . and have cleaner, faster, dustless sweeping . . . inside and outside. There's a WILSHIRE Model for every need...8 to 40 times faster than a man with a broom.

WRITE FOR ILLUSTRATED FOLDER AND PERFORMANCE DATA

WILSHIRE POWER SWEEPER CO.

526 West Chevy Chase Drive, Glendale 4, California

For more details circle NED-677 A4 on enclosed inquiry slip

NEW

Portable, Hydraulic "GUILLOTINE"

CUTS 1¼" WIRE ROPE!

Guillotine Model 10A with Integral Hand Pump

Tremendous cutting power . . . 22½ tons thrust!

Light weight . . . only 45 lbs. net. Take the tool to the job.

Positive blade retraction . . . will not jam.

Easy hand pump action.

ALSO AVAILABLE WITH

Electric or Compressed Air operated pump

Automatic, power-operated pump assemblies available that are also portable or may be permanently mounted for production application. Special high-power pump available for production cutting over 200 cuts per hour.

Write For Catalog. Dept. NED-1

MANCO MFG. CO.

BRADLEY, ILLINOIS

For more details circle NED-678 A4 on enclosed inquiry slip

FAMOUS "CHEM-BOARD"* **CONVOY** TOTE BOXES

*Chemically Hardened Corrugated Board

SOLD THROUGH LOCAL INDUSTRIAL DISTRIBUTORS

Cost—weigh—50% to 60% less than steel. A wide range of sizes in standard and custom made NESTING, STACKING, VERTICAL TOTE BOXES. Write for complete information, prices, name of distributor in your area.

CONVOY RECORD STORAGE FILES

Sold Only by YOUR LOCAL STATIONER

Used by most famous names in industry and businesses of all kinds. CONVOY "CHEM-BOARD" files for record storage made in letter, legal, and 12 other sizes. Stack to ceiling, mate together. Call your local stationer or write for name of stationer nearest to serve you.

CONVOY, INC.

Canton 6, Ohio

P. O. Station B, Box 216-N

For more details circle NED-679 A4 on enclosed inquiry slip

15,000 TYPES, SIZES & RATINGS TO MEET YOUR HEATING NEEDS

Chromalox Electric Heaters are the low cost answer to heating liquids, gases, viscous fluids, dies, molds, platens, moving parts and literally hundreds of other jobs requiring dependable, accurate, easily controlled heat. If you are not familiar with the many time and money saving applications possible with Chromalox Electric Heaters, get the complete details on how these compact units can fit into your plant operations.

learn more about electric HEAT

Write for the illustrated booklet "100 Ways to Apply Electric Heat."

IB-15

Industrial Div., EDWIN L. WIEGAND CO., 7509 Thomas Blvd., Pgh. 8, Pa.

See other ad on page 4

CHROMALOX

ELECTRIC HEAT FOR MODERN INDUSTRY

▲ For more details circle NED-680 A4 on enclosed inquiry slip ▲

Sturtevant

MICRONIZER* GRINDING MACHINE

Reduces Solids to Micron Sizes

The new Sturtevant *Micronizer* grinding machine is a fluid jet grinder especially designed to reduce solid materials to particle sizes in the micron ranges.

Sturtevant *Micronizers* are used for simultaneous dry grinding and classification of solids. The variety of materials that can be processed is large and includes both metallic and non-metallic minerals and ores, metals, pigments, insecticides, fungicides, pharmaceuticals, plastics, dyes and numerous other organic and inorganic products. Available in capacities from ½ to 3000 pounds per hour.

*Micronizer is the Registered Trademark of the Sturtevant Mill Co.

STURTEVANT MILL COMPANY
114 CLAYTON STREET, BOSTON 22, MASSACHUSETTS
Designers & Manufacturers of:
DENS AND EXCAVATORS • MIXERS • SCREENS • PULVERIZERS
ELEVATORS • AND COMPLETE FERTILIZER UNITS

▲ For more details circle NED-681 A4 on enclosed inquiry slip ▲

Measure, Cut and Strip Insulated Wire

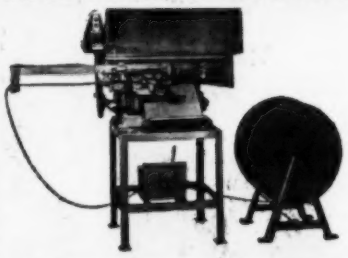
IN ONE SPEEDY OPERATION

ON ARTOS *Automatic* MACHINES

Does your production require cutting and stripping of insulated electric wire, cord, cable, etc.?

You can produce finished leads much *faster*... as many as 3000 per hour in 15-in. lengths... on this Artos Automatic Machine. Substantial time savings are obtained over the best manual or semi-automatic methods.

Operation is fully automatic—wire is taken from the reel, measured, cut to length and stripped at one or both ends. Unskilled help can handle the machine. Set-up is easy for different wire types and lengths.



MODEL CS-6E CAPACITY

FINISHED PIECES PER HOUR—From 3000 per hour up to 15 in. lengths to 500 per hour in 64-97 in. lengths.
MAXIMUM STRIPPING LENGTH—1½ in. at each end (greater stripped lengths are special).
MAXIMUM CUTTING LENGTH—97 in.
MINIMUM CUTTING LENGTH—2 in. (also as short as ⅞ in. under certain conditions).
TYPES OF WIRE HANDLED—Solid or stranded single conductor wires, parallel cord, heater cord, service cord, etc.
MAXIMUM WIRE SIZE—No. 10 stranded or No. 12 solid.

Other Artos Machines

The complete line of Artos automatic wire cutting and stripping machines will handle *cut lengths* from 1 in. to 60 ft., *stripped lengths* to 6½ in. at one end and 8½ in. at the other, wire from No. 12 to No. 000 gauge, and up to 3600 pieces per hour. Ask for recommendations on your problems.

WRITE FOR BULLETIN

Get the complete story—write for Bulletin 35-C on Artos Model CS-6 machines.

ARTOS ENGINEERING CO. *Automatic Wire Cutting and Stripping*

2751 S. 28th St. • Milwaukee 46, Wis.

▲ For more details circle NED-682 A4 on enclosed inquiry slip ▲

MODULAR DESIGN KIT for "Project Tinkertoy" assemblies

Included in PT-1000 modular design kit are all necessary hand tools, materials, chemicals, module parts and standard accessories required for design and construction of Project Tinkertoy electronic modules and subassemblies, or complete end equipment using modular designs. Found in the kit are 12 specially designed hand tools, 14 standard tools peculiar to the process, assortments of wafers and socket bodies, 1200 precured tape resistors and 1200 ceramic body capacitors. Also included are paints, thinners, solvents, screens for printing standard capacitor patterns and metal-clad XXP Bakelite and accessories for fabricating etched circuit patterns. Made by **Communication Measurements Laboratory, Inc.,** 352 Leland Ave., Plainfield, N. J.

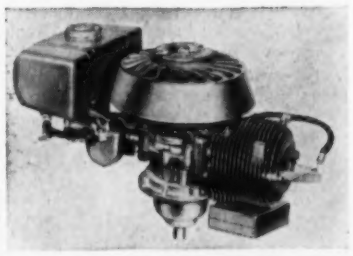
▲ For more details circle NED-683 A4 on enclosed inquiry slip ▲

ELECTRONIC INSTRUMENT STAND holds up to three A-size cabinets

Considerable space is saved on laboratory work benches or inspection tables with use of model 901 Tek-Stand which holds up to three A-size instrument cabinets vertically. Special arms clamped to upright member firmly attach to backs of instrument cabinets, allowing adjustment to any position or angle for easy reading. Multiple alternating current outlets are provided in base for instrument power cords. Instruments shown mounted on stand include an audio oscillator, a high resistance bridge and a vacuum tube voltmeter. Made by **Beckman Instruments, Inc.,** Shasta Div., Dept. S-1, P. O. Box 296, Station A, Richmond, Calif.

▲ For more details circle NED-684 A4 on enclosed inquiry slip ▲

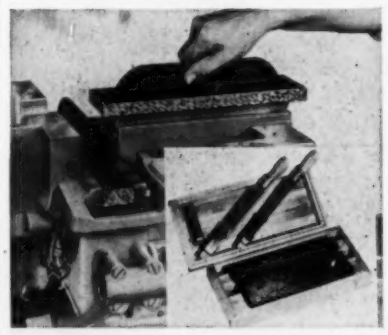
LIGHTWEIGHT GASOLINE ENGINES horizontal or vertical crankshaft



Rated at 2 hp and weighing 13 and 14½ lb, models AV47 and AH47 gasoline engines have vertical and horizontal crankshaft arrangements respectively and are designed for general purpose use as in powering chain saws and rotary mowers. They are of the easily maintained two-cycle type, and feature ball bearing crankshaft mountings and optional diaphragm or reed valve carburetion. Concentric cylinder cooling fin arrangement contributes to efficiency and makes possible continuous operation. Made by **Power Products Corp.,** N. River St., Grafton, Wis.

▲ For more details circle NED-685 A4 on enclosed inquiry slip ▲

ANGLE & SURFACE PLATE SETS for re-truing B & S automatics



Re-truing the dovetail cross, vertical and turret slides of Brown & Sharpe automatic screw machines is facilitated by these precision angle and surface plate sets cast from quality grade Meehanite metal. Plates are lightweight and easy to handle. Complete set includes a flat surface plate, a dovetail angle plate, two hand scrapers, a tube of "high spot blue" and a wooden box for safe, dust-free storage. Type O set size is for model O, OG, 2 and 2G machines; while size OO is made for OO and OOG automatics. Made by **Beaver Industries,** 1500 W. Adams St., Chicago 7, Ill.

▲ For more details circle NED-686 A4 on enclosed inquiry slip ▲

Let's Look at the Record!

One of the best ways to determine the acceptance of Zallea Stainless Steel Expansion Joints is to look at the sales record of *reorders* over the years.

Here's a sample:

Company	No. of Orders Placed*	Since
American Viscose Corp.	79	1940
Bethlehem Steel Corp.	51	1935
Consolidated Edison Co.	115	1933
E. I. du Pont de Nemours & Co., (Inc.)	308	1934
Hercules Powder Co.	133	1937
Koppers Co., Inc.	165	1942
Nordberg Mfg. Co.	174	1942
Texas Co.	261	1938

*Including as many as 485 joints in a single order!

We would like to add your name to our long list of satisfied customers. Write today for literature. Zallea Brothers, 818 Locust Street, Wilmington 99, Delaware.

Zallea

▲ For more details circle NED-687 A4 on enclosed inquiry slip ▲

IT'S A CINCH! TO SHARPEN SMALL DRILLS

Black Diamond PRECISION DRILL GRINDER

✓ ONLY drill grinder that mechanically positions drill for grinding!
✓ ONLY drill grinder that grinds BOTH LIPS IN ONE OPERATION!
✓ ANYONE can grind a drill expertly on a Black Diamond No guesswork—just position the drill, grind and you have a perfect point!

BLACK DIAMOND SAW AND MACHINE WORKS, INC.
72 NORTH AVE., NATICK, MASSACHUSETTS

▲ For more details circle NED-688 A4 on enclosed inquiry slip ▲

WHEN IT'S LIQUID LEVEL CONTROL it's FISHER

...the Accepted Standard for a liquid level controller that is high in sensitivity and accuracy, versatile in handling all kinds of liquids, ruggedly built, easy to operate and simple to maintain.

Write for Bulletin F-3

FISHER GOVERNOR COMPANY
Marshalltown, Iowa

FISHER
WORLD LEADER IN RESEARCH FOR BETTER PRESSURE AND LIQUID LEVEL CONTROL

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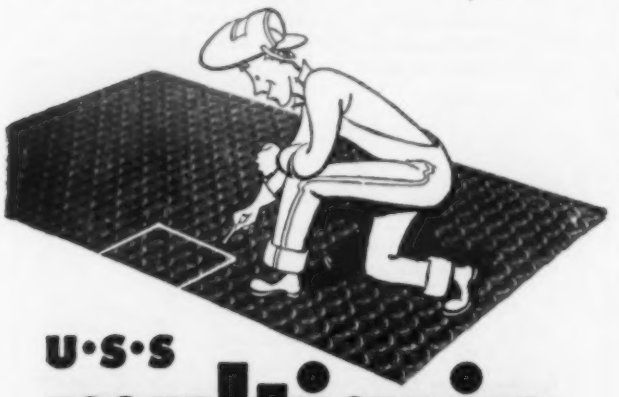
You can cut and join this floor plate to any shape you need,
And Multigrip will fabricate with utmost ease and speed;
For Multigrip is so designed to make the sections match
Placed end to end, or side to side, or in a side-end patch...
The pattern that is formed will be the same from all directions,
And Multigrip needs fewer joints; it comes in bigger sections!



U·S·S
multigrip
USS
FLOOR PLATE

UNITED STATES STEEL CORPORATION, PITTSBURGH
COLUMBIA-GENEVA STEEL DIVISION, SAN FRANCISCO
TENNESSEE COAL & IRON DIVISION, FAIRFIELD, ALA.
UNITED STATES STEEL SUPPLY DIVISION, CHICAGO
UNITED STATES STEEL EXPORT COMPANY, NEW YORK

Sold by leading distributors from coast to coast 3-66

UNITED STATES STEEL

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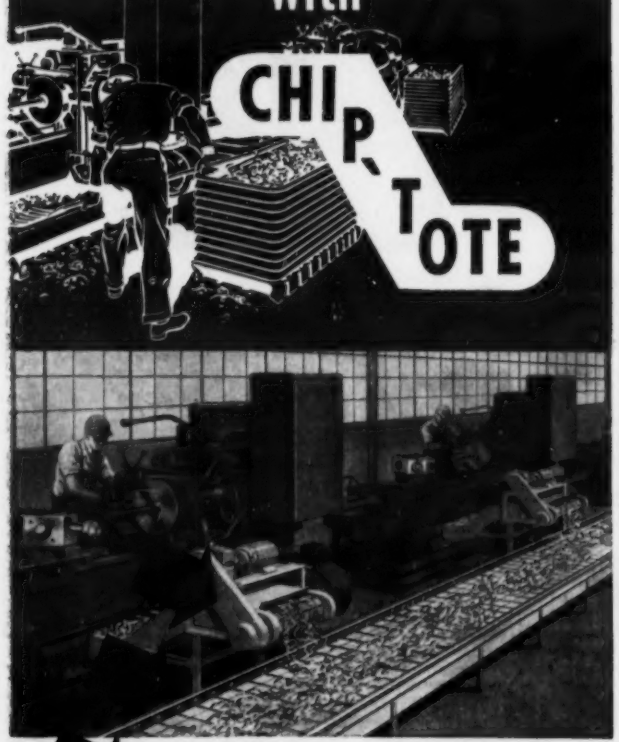
Automatic Scrap Removal on Any Machine Tool with



ELIMINATE SHUT-DOWN SPEED PRODUCTION

Get 60 minutes production every hour from your machine tools! CHIP-TOTES remove chips, turnings and borings continuously and automatically from machine tools while they are in operation... there's no need to shut down valuable machinery for manual scrap removal.

CHIP-TOTES can be furnished to serve practically any automatic or multiple-spindle machine. Speed of operation is synchronized with the machine's metal-removing capacity and rate of coolant flow.

For utmost efficiency, a battery of CHIP-TOTES can be set up for discharge onto MAY-FRAN hinged-steel belt conveyors which transmit scrap to disposal point.

For information on how CHIP-TOTES and MAY-FRAN engineered handling systems can increase your production, write today for catalog.

1737-MF

DESIGNERS AND ENGINEERS OF COMPLETE SCRAP HANDLING SYSTEMS

MAY-FRAN ENGINEERING, INC.

1711 CLARKSTONE ROAD • CLEVELAND 12, OHIO

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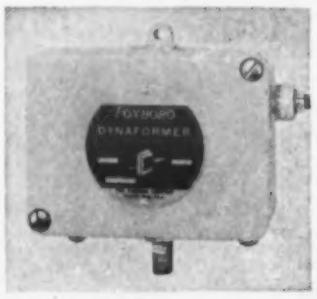
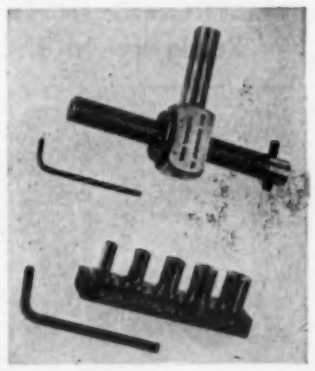
PRESSURE CELL
converts fluid pressure into voltage



Highly sensitive Dynaformer pressure cell converts fluid pressure into a proportional alternating current voltage which is measured in terms of pressure by a Foxboro electronic resistance Dynalog instrument. The transducer cell is accurate to within ±¼-per cent at any point and is protected up to 150 per cent of its rating. Any pressure range between 0 to 30 in. Hg and 0 to 10,000 psi is available. All parts are enclosed in a splash-proof case and electrical components are embedded in plastic for moisture protection. Made by **Foxboro Co.**, 26 Neponset Ave., Foxboro, Mass.

▲ For more details circle **NED-692 A4** on enclosed inquiry slip ▲

FLY CUTTER
has micrometer screw adjustment



Provided with micrometer screw adjustment, model 805 fly cutter has a cutting range of 1⅛ to 7½-in. diameter. Radius adjustments can be made without removing tool from its chuck, and settings are locked by means of recessed socket-head set screws. Tool has ½-in. diameter shank and uses a 3/16-in. diameter high speed steel cutter. It can be used with or without pilot and will cut up to ½-in. deep. Five pilots are available having diameters ranging from ¼ to ½ in. Made by **Mico Instrument Co.**, 80-D Trowbridge St., Cambridge 38, Mass.

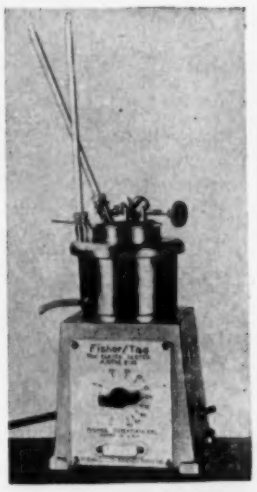
▲ For more details circle **NED-693 A4** on enclosed inquiry slip ▲

GRINDER ATTACHMENT
facilitates grinding flat surfaces

Consisting of a bell-shaped steel jacket enclosing a Du Pont heat resisting rubber core, Flexentric Oscillator is an attachment for portable disk grinders which facilitates production of flat surfaces, permits use of full face contact of abrasive disk and polisher, and minimizes scoring. Device acts as a flexible coupling between tool output shaft and grinding pad, permitting oscillation of grinding pad and cushioning of sudden load increases. It is available in standard and heavy-duty styles in sizes to fit all popular grinders. Made by **Flexentrik Corp.**, Dept. N, 555 Fourth St., San Francisco, Calif.

▲ For more details circle **NED-694 A4** on enclosed inquiry slip ▲

FLASH POINT TESTER
three models are available



Basically redesigned Fisher/Tag closed-cup flash point tester, originally made for the petroleum industry, can be used to test flash points of mobile liquids, except fuel oils, in closed containers below 175° F. It meets these specifications: ASTM, D-56; ASA, Z-11.24 Federal, 110.0 and API standard 509. A 150-w electric heater and variable power transformer with reproducing setting, supply the close control necessary for slow heating rate required by some tests. Inlet is provided for cooling water circulation between determinations. Gas and alcohol heated models are also made by **Fisher Scientific Co.**, 715 Forbes St., Pittsburgh 19, Pa.

▲ For more details circle **NED-695 A4** on enclosed inquiry slip ▲

RAYTHEON **WELDPOWER**

"makes any number of welds with identical characteristics"
says POLAROID CORPORATION

"In making many wire connections required in a research project, we have found Raytheon Weldpower eminently satisfactory" says Mr. D. P. Cooper, Jr. of Polaroid Corp. "Once set for type and size of wire, we can make any number of welds with identical characteristics. Wires are tungsten, molybdenum, brass, steel, nickel, etc. from .080" to .003" dia. No matter how unusual the combination, the flexibility of Weldpower equipment enables us to obtain a satisfactory weld in every case."

Look into the many advantages of joining ferrous, non-ferrous and dissimilar metals with Raytheon Weldpower Units. Send samples or write for full details. Address Dept. NE-1.

Raytheon Condenser Weldpower Control Units are available in three sizes and with appropriate Weldpower Heads.

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Excellence in Electronics
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INTERNATIONAL DIVISION, 19 RECTOR STREET, NEW YORK CITY

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Hose Replacement Reduced... 1/3

with Quaker IRONSIDES STEAM HOSE

How to lessen hose replacement yet maintain production? That was the cost problem faced by a large chemical company—and solved by Ironsides' ability to give three times the service of other makes. Braided with steel wire and bonded with rubber. Added braid of glass cord for insulation and extra strength. Kink-proof. Easy to handle. At least 4 times stronger than wrapped fabric hose yet costs no more. For economy, use Ironsides—a Quaker exclusive for greater service and safety.

Write for free folder and name of nearest distributor.

QUAKER RUBBER CORPORATION
DIVISION OF H. K. PORTER COMPANY, INC.
OF PITTSBURGH
Dept. D, Philadelphia 24, Pa. Branches in Principal Cities

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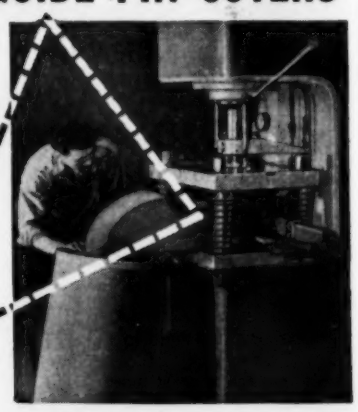
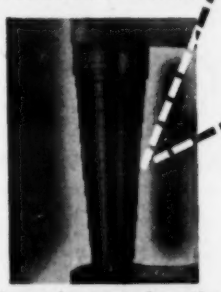
DIE LIFE INCREASED 25%
with
ELASTICONE GUIDE PIN COVERS

Get increased performance from Dies with Elasticone Guide Pin Covers. Protects pins and bushings from nicks and scratches... preserves Dies' accurate alignment... reduces lubrication and maintenance. JUST SNAP INTO PLACE! *No Installation Costs!*





Investigate today the many new cost-saving engineering advantages in die designing with Elasticones.

Elasticones are manufactured in stock sizes. Specify O.D. of bushing and full open height of set when ordering.

Write for full information and literature.

CENTRAL
2208 EAST HUNTINGDON ST. PHILA. 25, PA.

CENTRAL SAFETY EQUIPMENT COMPANY

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SAVE UP TO 85%

WAR SURPLUS SAVINGS

NEW INSIDE – OUTSIDE VERNIER CALIPERS
German made by one of Europe's leading specialists in precision tools. Measures inside-outside & depth in .001" to 6" in 1000ths and 1/10mm to 150mm in 100ths. 9.75
MICROMETERS – 0" to 1" in 1,000ths. 9.75
Has lock-nut & ratchet ...ONLY – ...

STAND MAGNIFIER
Handy stand magnifier with universal adjustments. Overall height: 6". Has powerful, clear magnifying lens. 1.49

BENDIX HYDRAULIC PUMP & MOTOR
Has 3-1/2 GPM capacity at 600 PSI. Motor is 1½ HP, 24V, D.C. Will operate on either 12 or 32V, DC current. Has built-in relief valve adj. to 1500 PSI. This unit ideal for hyd. lifts, portable loaders, etc. 19.50

MAGNETIC BASE – INDICATOR HOLDER...
A time saver for precision checking. Magnetic base fits curved or flat surface. Has 45-50 lb. pull. Stainless steel 6½" rod mounted in ball socket permits universal settings .. 3.95
Note: We have complete line of instruments, depth gauges, inspection mirrors, etc. WRITE TODAY

HYDRAULIC HAND PUMP
Operating pressure 2000 PSI. Cap., 1.5 cu. in per complete cycle ... 12.75

GEAR HEAD MOTORS
Heavy duty, G.E. Gear Head motor. 2 HP, 24V. DC. 125 amp., reversible motor drives a reduction gear unit giving 36 to 1 ratio at take-off. Also will operate on 6 or 12 volts.
36 to 1 G.E. (306 shaft RPM)
28 to 1 Eclipse (130 shaft RPM)
40 to 1 Eclipse (110 shaft RPM)
10.95 EA.

HYDRAULIC ACCUMULATORS
A-2B FLOATING PISTON TYPE – 4"x 18" Built to stand 2,000 PSI 12.75
A-5 VICKERS – 10" dia. Ball type. Built to stand 2000 P.S.I. 24.75

ELECTRIC ACTUATORS
Hundreds of uses for any mechanical device needing controlled 2 way action. Opens, closes, raises or lowers doors – windows – gates – valves. CTU-2 – Foote Linear Actuator – 24 volt, DC, 8500 RPM, 1/16 HP – series wound motor. 4½" stroke in 13½ sec. Compression and tension loads up to 750 lbs. Adjustable micro switch for limits of travel. Overall lngth., retracted 11" 7.95
We also carry many more sizes and types of Actuators. Write today for information.

HYDRAULIC CYLINDERS
Gives 20,000 lb. thrust (push or pull) using 1500 PSI line pressure as obtained from our hydraulic pumps. Will produce up to 40,000 lbs. thrust with 3000 PSI. Can also be used on low pressure air systems. 4" bore; 18" stroke; 30½" length. Ideal for road jacks – shop machinery. 29.75

No. 3 HYDRAULIC CYLINDER
Double action. Bore is 1" – Shaft ½". Has stroke of 2½" to 4". Stroke can be adjusted with internal sleeve stops. Overall length is 8½". Will take 1500 lbs. continuous duty. 3000 lbs. intermittent. Will lift or push up to 1100 lbs. 5.75
We stock over 30,000 Hydraulic Cylinders, Valves, Pumps, Accumulators, Hand Pumps, Motors, Hose, etc. All at Money Saving Prices.

230 Pg. CATALOG
Amazing Values! 1000's of items for Ship., Mechanic, Sportsman, etc. Save on Machine Tools, Hydraulics, Pumps, Valves, Hand & Power Tools, Instruments, etc. Send for your copy today!

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Order from this ad. Pay by M.O. or check. P.O's accepted from D&B firms. ½ deposit with C.O.D's. All Prices F.O.B. Los Angeles

For more details circle NED-699 A4 on enclosed inquiry slip

For maximum "see-ability"... better work...increased production

LUSTRA JADE-LITE

LUSTRA JADE-LITE gives a special quality of light that steps up "see-ability". In addition, its unique tone reduces glare, helps eliminate eye-strain, produce better work and boost production. Jade-Lite is absolutely tops for use in critical work areas. Write for the whole story on Jade-Lite Fluorescent Tubes—it can bring new efficiency and economy. Lustra Corporation, Dept. R-1, 36 Washington St., Brooklyn 1, N. Y.

Lustra
AMERICA'S DATED LAMPS

DOUBLE DUTY REFLECTOR LAMPS, INCANDESCENT LAMPS, FLUORESCENT TUBES, SPOTLITES AND FLOODLITES, RUGGED DUTY LAMPS, FLUORESCENT FIXTURES AND STARTERS

For more details circle NED-700 A4 on enclosed inquiry slip

BENCH-TYPE PRODUCTION

Plastic Seal dipping tank

FOR LOW COST PROTECTION FROM RUST AND DAMAGE

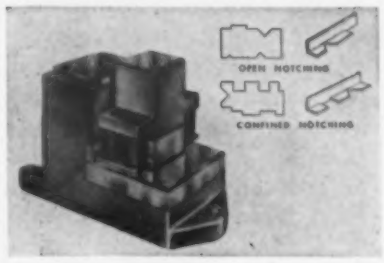
- Constant level in dipping area
- Impeller-type agitator
- Thermostatically controlled temperature
- 14 pound capacity
- Increases pot-life — reduces discoloration.

Write today for price information and free engineering service on production dipping problems.

GLOBE *Imperial Corporation*
2023 Kishwaukee St., Rockford, Illinois

For more details circle NED-701 A4 on enclosed inquiry slip

NOTCHING UNITS
in both open and confined types



Available in both open and confined types, notching units are self-contained permanently-aligned punches and dies with built-in lifter springs. They have shut height of 6 5/16 in. and die height of 2 19/32 in. They can be set up on T-slotted plates or template mounted in or out of the press. Punch sizes are 2 x 2, 3 x 3 and 5 x 5 in., available in corner, 90-degree V and angle notching styles. Special shapes can be made to order. Made by **General Riveters, Inc.**, Toolset Div., Hertel at Elmwood Ave., Buffalo 7, N. Y.

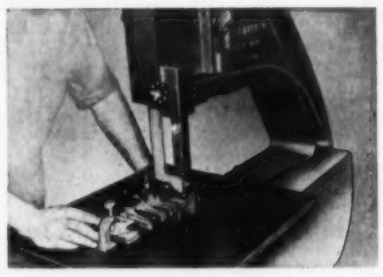
For more details circle NED-702 A4 on enclosed inquiry slip

PORTABLE SAWS
made in 7, 8 and 9-in. sizes

Features of redesigned line of Black & Decker Utility 7, 8 and 9-in. heavy duty portable saws include natural-position handle, large lever for retracting lower blade guard for making pocket cuts, heavy duty universal motors, and improved cutting line and blade visibility. A large shoe provides good support during right or left-handed operation. Saws have two depth adjustments, front and rear. Large wing nuts facilitate depth and bevel adjustments. The 7 and 8-in. models can be set at 0-in. depth of cut, while the 9-in. model has a minimum cutting depth of ¼-in. Maximum depth of cuts are 2 7/16, 2 13/16 and 3¼ in., respectively. Made by **Black & Decker Mfg. Co.**, 762 E. Pennsylvania Ave., Towson 4, Md.

For more details circle NED-703 A4 on enclosed inquiry slip

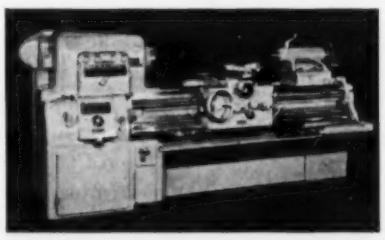
BAND SAW
has a 24-in. throat



Designed for cutting stacked sheet metal, the model 24S three-wheel band saw has a speed control which adapts it for cutting iron, steel, forgings, aluminum, bronze, wood, plastics and stainless steel. Only 61 in. high, it can cut to the center of 48-in. sheets. Blade speeds can be adjusted from 100 to 3300 fpm. Smooth cutting is assured as the blade stays in position on the wheel. Cast frame eliminates blade chatter, and a two-wheel chain drive minimizes blade slippage. Ball bearings are neoprene-sealed, and blades and wheels are fully enclosed. Sheet metal clamps and riser bar insert are included. Made by **Bett-Marr Mfg. Co.**, 621-A Excelsior Ave., Hopkins, Minn.

For more details circle NED-704 A4 on enclosed inquiry slip

LATHES
in 13, 16 and 20-in. sizes



Available in 13, 16 and 20-in. sizes, series 61 engine and toolmaker's lathes incorporate built-in apron - controlled power rapid traverse to carriage and cross slide. This provides rapid tool positioning and retraction and fast carriage return. Longitudinal movement to right and left is 160 ipm and cross movement is 75 ipm. Safety clutch which disconnects drive in event of jamming is built in, and a direct-length reading dial facilitates multiple diameter turning and blind hole boring. In addition to the standard models, lathes of this series are also available in numerous plus-swing sizes. Leadscrew, feed rod, control rod and traverse rod on longer bed units are continuously supported on traveling carriers. Made by **Monarch Machine Tool Co.**, Oak St., Sidney, O.

For more details circle NED-705 A4 on enclosed inquiry slip

WANT LOW MAINTENANCE COSTS?

USE COMPACT, HIGH-PERFORMING "BUFFALO" "PC" CABINETS to

- Air Condition
- Control Humidity
- Regulate Temperature
- Clean the Air

"Buffalo"

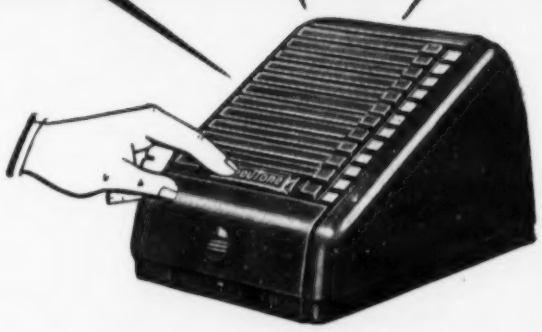
Invest in sturdily-built "Buffalo" "PC" Cabinets. They're precision-made and have "Buffalo" Fans and tough casings to return big dividends of long service, easy operation, and low maintenance.

WRITE FOR BULLETIN 3703A

BUFFALO FORGE COMPANY
215 MORTIMER ST. BUFFALO, NEW YORK
PUBLISHERS OF "FAN ENGINEERING" HANDBOOK
Canadian Blower & Forge Co., Ltd., Kitchener, Ont.
Sales Representatives in all Principal Cities

For more details circle NED-706 A4 on enclosed inquiry slip

How to get MORE PRODUCTION MINUTES per hour!



Don't walk–TALK with Executone Intercom!

No need to waste time shuffling back and forth for information and instructions. Just push a button and *talk!* Walking time becomes *production* time. With Executone roving employees are located instantly...telephone lines are kept open for outside calls...more work gets done *faster!* Thousands of installations prove that Executone cuts costs and increases production—*pays for itself many times over!*

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INTERCOM AND VOICE PAGING SYSTEMS
Service on your premises by factory trained technicians

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Without obligation, send booklet describing how Executone helps cut costs. I am particularly interested in:
☐ Plant-office communication ☐ Switchboard relief
☐ Locating personnel ☐ Penetrating high noise levels
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In Canada—331 Bartlett Ave., Toronto

For more details circle NED-707 A4 on enclosed inquiry slip

A-97

Precise PRESSURE Measurement

Sensitivity 0.2%

W&T PRECISION LOW PRESSURE GAUGE—FA-141

Ranges: All ranges from 0-10 inches water to 0-30 inches Hg.

Write today for Publication No. TP-27-A

WALLACE & TIERNAN

ELECTRICAL MECHANISMS AND PRECISION INSTRUMENTS
Belleville 9, New Jersey . . . Represented in Principal Cities
In Canada, Wallace & Tiernan Products, Ltd.—Toronto

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How a 'Sexauer' Easy-Tite faucet washer costing pennies can save you $115.22 a year!

A tiny, 1/32" faucet leak wastes 95,040 gallons—*$24.14* worth*—of water yearly.

Hot water leakage is even costlier . . . Fuel waste adds upward to *$91.08*** more to the loss. Total down the drain: *$115.22.*

And this is the dollar loss caused by only *one* pinpoint leak!

Fuel Waste		Water Waste	Total Waste
Oil (792 gals.)	**$91.08	$24.14	$115.22
Coal (9,879 lbs.)	88.91	24.14	113.05
Gas (84,411 cu. ft.)	84.81	24.14	108.95

*Water costs (figured at $1.90 for 1,000 cu. ft.) authenticated by Hackensack Water Co. **Fuel costs authenticated by American Gas Association.

Save money; cut costs; stop leaks with dependable 'Sexauer' Easy-Tite faucet washers.

Built like a tire with Fiberglas reinforcement

Easy-Tite faucet washers are made of a special du Pont product, instead of rubber, and reinforced with Fiberglas. The result is a washer that resists the closing squeeze that splits and mushes ordinary washers. And Easy-Tites withstand destructive heat (up to 300° F. by test). These features explain why *'Sexauer' Easy-Tites outwear ordinary faucet washers 6 to 1!*

By avoiding labor on those 5 additional repairs, Easy-Tites cut today's high maintenance costs 83⅓%! But Easy-Tites not only save water, fuel, labor; they also prolong the life of expensive fixtures.

FREE CATALOG—Easy-Tite faucet washers are just part of the line of over 3000 'Sexauer' Triple-Wear plumbing repairs parts and patented precision tools.

Get complete information on Easy-Tites and other cost-cutting 'Sexauer' materials. Send for our FREE, new 118 page Catalog H. Fill in and mail the coupon today.

J. A. Sexauer Mfg. Co., Inc. Dept. AU-14
2503-05 Third Ave., New York 51, N. Y.

Gentlemen: *Please send me a copy of your FREE, new 118 page Catalog H.*

My name.....Title.....
Company or Institution.....
Street.....
City.....Zone.....State.....

SEXAUER
WORLD'S LEADING SPECIALISTS IN PLUMBING AND HEATING REPAIR PARTS

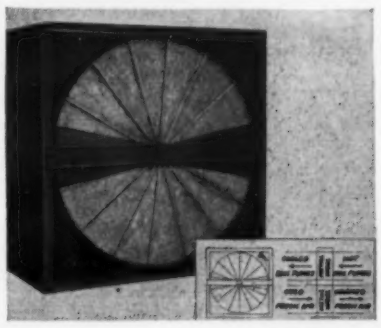
▲ For more details circle NED-709 A4 on enclosed inquiry slip ▲

HAND PRESS for small parts assembly

Designed for press fitting small parts, Hand Potence Press has slides which can be adapted for magazine feed. It is also available with micrometric adjustment and option of hand or foot operation for instrument, watch and clock assemblies. Unit has a spring-loaded center pin for part ejection, or a solid work plate with a small center hole. Made by **Hairspring Vibrating Co.,** Dept. BD, 406 32nd St., Union City, N. J.

▲ For more details circle NED-710 A4 on enclosed inquiry slip ▲

HEAT CONSERVING VENTILATOR lessens heat lost by ventilation

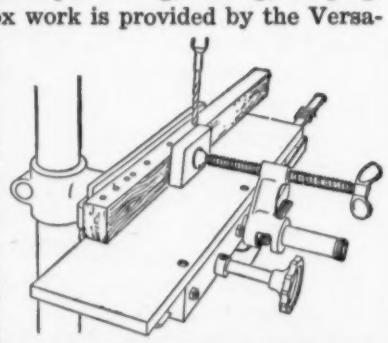


Heat or cold usually lost at ventilation system outlets is retained by Therm-O-Wheel heat conserving ventilator. Unit consists of a slowly rotating wheel packed with metallic wool which absorbs heat from the exhausting air and then transfers this heat to the incoming air. It operates efficiently regardless of temperature differential between incoming and outgoing air, and can be used wherever interior temperature regulation is necessary, often permitting use of smaller heating and cooling units. Heat regenerator revolves on grease packed and sealed tapered roller bearings and is designed for easy maintenance. Made by **Therm-O-Wheel, Inc.,** 1042 22nd St., Far Rockaway, N. Y.

▲ For more details circle NED-711 A4 on enclosed inquiry slip ▲

MECHANICAL FEED TABLE for various power tool operations

Mechanical feed to move material for such work as mortising, routing, multiple boring, fluting, shaping, grinding and core-box work is provided by the Versa-Table. It can be used on a drill press, mortiser, radial saw, router, lathe, mill and similar tools. A general purpose vise and carriage, it provides a quick and accurate means of positioning material for repetitive cuts or for feeding material to the cutter. Quick-acting clamp holds the material to the table fence, the table and stock being advanced by a handwheel. Total table traverse is 12 in. Made by **J. D. Wallace & Co.,** Dept. NED, 134 S. California Ave., Chicago 12, Ill.



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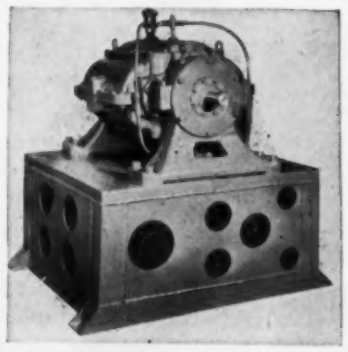
TRUNNION GEAR BOXES for speeds from 1750 to 60,000 rpm



Line of gear boxes with concentric input and output shafts and with gear housing mounted in trunnion bearings is made for speeds from 1750 to 60,000 rpm and horsepowers up to 800. For high torque applications, bearings are of roller type, and for high speed units, trunnion bearings are of hydrostatic type with an oil system independent of main gear oil system. Gear boxes are used in conjunction with low speed dynamometers, and gear ratios vary from 1:1 up to 20:1. Housing is sometimes attached to dynamometer housing, or in some cases, gear box torque arm is independent, giving an accurate case torque re-action. Made by **Universal Gear Corp.,** 1452 E. Nineteenth St., Indianapolis 7, Ind.

▲ For more details circle NED-713 A4 on enclosed inquiry slip ▲

▲ For more details circle NED-714 A4 on enclosed inquiry slip ▲

SHELDON
CHICAGO U. S. A.

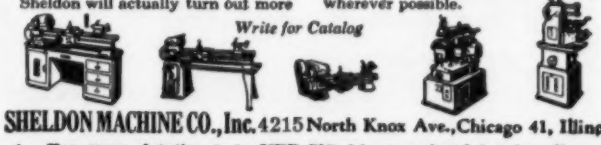
More will be *profit* with a SHELDON

It actually costs less to do most turning jobs on a Sheldon Precision Lathe. Machine-tool investment is cut to a fraction. Power cost is materially reduced. Less experienced operators can operate Sheldons safely and efficiently. Even cost-loadings for plant—floor space, heat and light are lower because two Sheldons can often operate in the space occupied by one large lathe.

On most "everyday" jobs a Sheldon will actually turn out more pieces per hour too. With double V-belts to the spindle Sheldon lathes deliver enough power to take a healthy bite in direct drive, at really high speeds. Sheldon's "Zero Precision" Taper Roller Bearings permit work to the closest tolerances. Very seldom if ever are such extremely accurate bearings used in other lathes.

You will actually keep more as profit if you use Sheldon Lathes wherever possible.

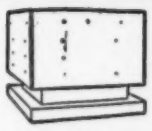
Write for Catalog



SHELDON MACHINE CO., Inc. 4215 North Knox Ave., Chicago 41, Illinois

▲ For more details circle NED-715 A4 on enclosed inquiry slip ▲

Hartzell Roof Ventilators Can Rid Your Plant of Heat & Fumes



AIRJET

ROTARY

PENTHOUSE

Hot, smoky, fume-laden air cuts production efficiency. If it's happening in your shop, you can stop it with a Hartzell fan-powered roof ventilator. Your nearby Hartzell field representative will help you choose the right unit and plan the most effective installation.

The Hartzell Automatic Airjet eliminates all of the costly, complicated mechanisms of most designs. Operation is as simple as it is effective. Louvres open when the fan goes on, close when it goes off. To increase efficiency by minimizing resistance, the Hartzell rotary roof ventilator responds instantly to the slightest change in wind direction. The Hartzell penthouse is a sturdy steel fan housing, completely weather-tight.

Top performance from any of these three units is insured by the established efficiency of the Hartzell fan. A new free bulletin, A-109, gives complete air delivery figures. If you don't have your copy, write for one today.

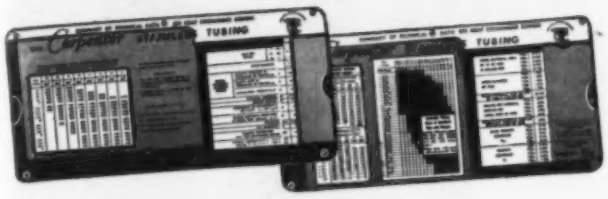
HARTZELL *propeller fan co.*
Div. of Castle Hills Corp.
Dept. G. PIQUA, OHIO

ENGINEERING OFFICES IN PRINCIPAL CITIES

▲ For more details circle NED-716 A4 on enclosed inquiry slip ▲

HEAT ON? TRANSFER IT QUICK *

with this Super Slide Chart



*Get the information you need on physical properties, sizes and gauges, cross-sectional area, velocity constants, pressure, weights and other technical data on Carpenter Stainless Tubing for Heat Exchanger applications. It's all condensed in this handy slide chart. Write for it today, no obligation of course.

THE CARPENTER STEEL COMPANY
Alloy Tube Division, Union, N.J.

For more details circle NED-717 A4 on enclosed inquiry slip

Amazing FLASH BOX OPENER
Opens Any Carton Quicker . . . Cleaner

Exclusive patented blade holder adjustable to varying thicknesses of carton covers.

THE ONLY CARTON OPENER THAT GIVES YOU ALL THESE ADVANTAGES:

Penetrates exactly under the outer cover thickness • Protects contents of carton • Cuts clearly to permit re-use • Prevents accidents • Saves time • Eliminates fatigue. *Already accepted by leading industries.*

Retail Price $1.75

FLASH BOX OPENER CO., Inc.
52 W. Houston St. • New York 12, N. Y.

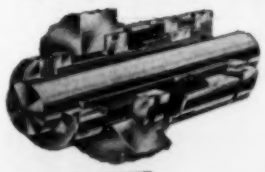
For more details circle NED-718 A4 on enclosed inquiry slip

JOHN CRANE CAN SUPPLY THE RIGHT SHAFT SEAL FOR YOUR APPLICATION!

"John Crane" offers a thoroughly comprehensive line of mechanical seals to meet every use and service condition. For new or old equipment . . . from pumps, agitators and speed reducers to washing machines and garbage disposal units . . . for handling water, oil, gas, chemicals or corrosives . . . from vacuums up to 1000 p.s.i. pressures . . . temperatures to 485°F.

Free! CATALOG!

Write today for our informative, fully illustrated catalog containing concise technical data and service recommendations on all John Crane Seals. Crane Packing Co., 1811 Cuyler Ave., Chicago 13, Ill.



JOHN CRANE CRANE PACKING COMPANY

For more details circle NED-719 A4 on enclosed inquiry slip

New Processes and Materials

PHOTOCOPY PROCESS
single solution is used to make copies in less than one minute

Clear, sharp photocopies of letters, design sketches and layouts, catalog pages or manuscripts can be made in less than one minute by Dri-Stat dry process photocopy equipment. Chief item in process is flat-bed printer that requires only 5¼ x 9 x 15 in. of space and has built-in electric timer. Negatives are made by exposing original with sheet of Dri-Stat No. 1 paper, then processing negative with sheet of No. 2 positive paper in separate unit in which motor-driven rollers guide sheets through single processing solution. Photocopy is separated from negative 20 seconds after passing through processor, and air-dries in few seconds.

For rotary printing, combination printer-and-processor is available which prints copy material up to 12 in. wide in any length. Processing solution is completely contained within unit to prevent spillage. Made by **Peerless Photo Products, Inc.**, Dept. NED, Shoreham, L. I., N. Y.

For more details circle NED-720 A4 on enclosed inquiry slip

RADIANT HEATING CABLE
for ceiling installation

Intended for ceiling installation, this radiant heating cable radiates its heat downward and can be automatically controlled by a thermostat in each room in which it is installed. Cable is a measured length of specially constructed and insulated electric wires. It is waterproof and noncorrosive. Heat given off does not dry the air or create drafts. Cable is stapled to ceiling lath and covered with plaster. Made by **Electromode Corp.**, 54 Crouch St., Rochester 3, N. Y.

For more details circle NED-721 A4 on enclosed inquiry slip

FLOOR FINISH
resists weathering and abrasion

Based on Goodyear Pliolite S-5 synthetic rubber resin, Hardcote concrete floor enamel resists weathering, alkalies and abrasion. It is suited for application to both wood and concrete floors, can be used with standard thinners and is applied by brush, roller or push broom. Color range is red, gray, green, black and white. Made by **McDougall-Butler Co.**, 2931 Main St., Buffalo 14, N. Y.

For more details circle NED-722 A4 on enclosed inquiry slip

CERAMIC MAGNET
is permanent in nature

Coercive force of about 1600 oersteds and an intrinsic coercive force of approximately 4000 oersteds are reported for Indox, a ceramic permanent magnetic material. Made of noncritical materials, it is a nonconductor and is virtually impossible to demagnetize. Material is best suited for uses in which the application limits magnetic lengths and in which magnet be subjected to high demagnetizing forces. Optimum magnetic length is about 1000 gauss at 800 oersteds. Made by **Indiana Steel Products Co.**, Dept. A, Valparaiso, Ind.

For more details circle NED-723 A4 on enclosed inquiry slip

PYREX GAUGE GLASS & CYLINDERS

furnished in any length or finish

• For fast service on Pyrex Tubular Gauge Glass, contact Swift! We can supply Tubular Gauge Glass or Cylinders from stock in any length or finish . . . 2 mm. O.D. to 7" O.D. . . . for chemical, pharmaceutical or industrial applications. Write, wire or phone for immediate delivery.

SWIFT Glass Division
SWIFT LUBRICATOR COMPANY, INC., ELMIRA, N.Y.
330 Tenth St., San Francisco 3 • 140 Boylston St., Boston 16
807 Mateo St., Los Angeles.

For more details circle NED-724 A4 on enclosed inquiry slip

5 TONS SHEET STEEL PER LOAD

• SPEEDS HANDLING
• LOWERS COSTS
• SAVES SPACE
• AIDS SAFETY

One man picks up, delivers directly where needed and unloads, easier, faster, safer, with a Cleveland Tramrail overhead system and sheet grab. Hand or electrically operated equipment.

GET THIS BOOK! BOOK No. 2008 Packed with valuable information. . . .

CLEVELAND TRAMRAIL DIVISION
THE CLEVELAND CRANE & ENGINEERING CO.
6627 East 285th St., Wickliffe, Ohio

CLEVELAND TRAMRAIL

For more details circle NED-725 A4 on enclosed inquiry slip

Easy to use . . . Easy to clean . . . Easy to service

DERBY SEALER MODEL 32 GUMMED TAPE DISPENSER
For Shipping Room and Production Line Packaging

• Rugged simplicity aptly describes the Model 32. Derby's exclusive, one-piece solid casting eliminates parts and provides added rigidity. What's more, the Model 32 is easy to clean, even during the hot summer months when machines tend to "gum-up."

• The Derby Model 32 accommodates any tape from 1" to 3" wide. Delivers from 4 inches to 34 inches of tape at one stroke.

• Derby's exclusive "moisture control" system maintains a maximum high water level in the tank to assure a constant supply of water to the brush, no matter how fast tape is dispensed.

• Also available is the Model 32-T with tool steel shear-type blades for cutting reinforced strapping tapes. Blades have two cutting edges to double their useful life before resharpening.

For further information, write Dept. NED

DERBY SEALERS, INC.
Derby, Connecticut

For more details circle NED-726 A4 on enclosed inquiry slip

FREE

NEW EXHAUST FAN CATALOG

Here is valuable data on how to plan effective exhaust fan installations, plus complete specifications of Emerson-Electric Exhaust Fans. Send today for Bulletin No. 745.

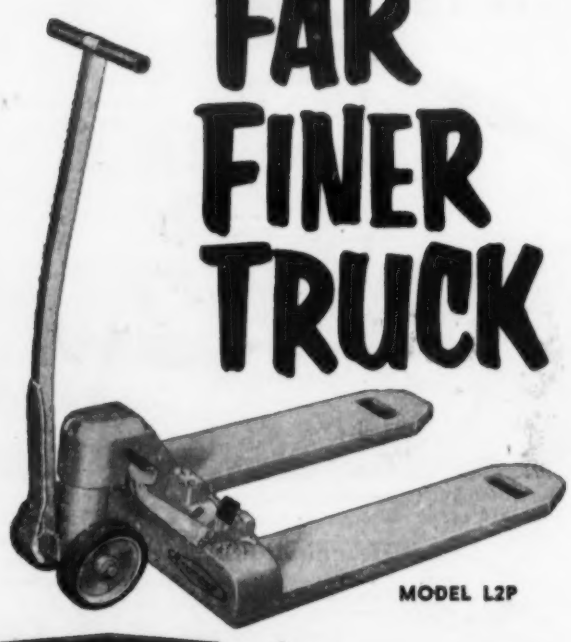
THE EMERSON ELECTRIC MFG. CO.
St. Louis 21, Mo.

EMERSON ELECTRIC
FANS • MOTORS APPLIANCES

▲ For more details circle NED-727 A4 on enclosed inquiry slip ▲

For a few dollars more, you get a

FAR FINER TRUCK



RAYMOND *Lightweight*
PALLET LIFT TRUCK

● When buying a lift truck, don't be guided by price alone. Remember . . . performance is far more important. The RAYMOND Lightweight Lift Truck, for example, costs slightly more than similar trucks . . . yet there's a vast difference in how long and how well it performs!

● This 2,000-lb. capacity truck is constructed of only the finest materials, backed by 30 years of manufacturing skill. Nowhere in this RAYMOND Truck is quality compromised. The result is a rugged lift truck offering all these outstanding features:

ONE-PIECE WELDED FORKS . . . ⅓ times stronger than bolted fork construction.

CHROME PLATED PUMP PISTON . . . prevents leakage, prolongs pump life.

STRONGER CONSTRUCTION . . . heat-treated alloy steel ram pistons, axles, lever shafts.

HIGHLY MANEUVERABLE — FOOT PEDAL OPERATED
EFFORTLESS PALLET ENTRY — REINFORCED HANDLE
THOROUGHLY LOAD TESTED — DUAL PURPOSE BRAKE
FACTORY ADJUSTED LINKAGE — LIGHTWEIGHT

● *Mail This Coupon*

The RAYMOND CORPORATION
4123 Madison St., Greene, N.Y.

Please send me Bulletin 207, describing your 2,000-lb. capacity Lightweight Lift Truck, as well as your 4,000 and 6,000-lb. capacity Lift Trucks.

NAME _____ TITLE _____
COMPANY _____
STREET _____
CITY _____ STATE _____

▲ For more details circle NED-728 A4 on enclosed inquiry slip ▲

New Literature and Catalogs

Gearmotors

Westinghouse Electric Corp. — 15-page bulletin B-5645 illustrates and describes Life-Line gearmotors, with full discussion of both gear unit and motor. Gear ratios for single, double and triple reduction are given, and special purpose units also described.

▲ For more details circle NED-729 A4 on enclosed inquiry slip ▲

Asbestos Textiles Handbook

"A Handbook of Asbestos Textiles" is title of 80-page manual which shows basic asbestos types available in nature, the various products made from them and their applications. Properties of cloths are incombustibility, high tensile strength, resistance to rot and decay and thermal stability. ASTM test procedures and specifications are included. Write on company letterhead to Asbestos Textile Institute, School of Ceramics, Rutgers University, New Brunswick, N. J.

▲ For more details circle NED-730 A4 on enclosed inquiry slip ▲

Fasteners

South Chester Corp., Southco Div.—24-page illustrated catalog B-2 covers screw fasteners, blind rivets, adjustable pawl fasteners, door latches, spring-grip fasteners, anchor nuts and door retaining springs. Installation procedures for each type are shown, along with applications, tables of dimensions and size, and descriptions. All units are designed for speedy installation.

▲ For more details circle NED-731 A4 on enclosed inquiry slip ▲

Jig & Fixture Components

Jergens Tool Specialty Co.—Line of over 500 mass-produced jig and fixture components is described in this illustrated folder. Included are blank jaws, sine fixture keys, malleable handles, T-slot nuts and bolts, shoulder and thumb screws, hand wheels, rest buttons, studs, swing C-washers, plastic balls, hand knobs, fixture keys and others. All are made in range of sizes.

▲ For more details circle NED-732 A4 on enclosed inquiry slip ▲

Rigid Polyvinyl Chloride

Houghton Laboratories, Inc.—Uses and properties of rigid polyvinyl chloride, fabricated to specifications, are described in Hysol 9000 catalog. Material is used for piping, tubing, duct work, work tables, sinks and other uses.

▲ For more details circle NED-733 A4 on enclosed inquiry slip ▲

Replacement Capacitors

Cornell-Dubilier Electric Corp.—Clear, concise data on 134 types of replacement capacitors are found in 36-page illustrated catalog 200. Specifications, diagrams, photos and prices are given. Units are indexed according to capacitor classification, type number and brand name.

▲ For more details circle NED-734 A4 on enclosed inquiry slip ▲

Drilling Machine

Hamilton Tool Co.—Super sensitivity and variable speed are advantages announced for the Varimatic small hole drilling machine in descriptive 4-page bulletin V-53. Unit is self-contained, swings radially on column and locks to any position. Infinitely variable speed ranges are 840 to 2700 rpm and 2900 to 9300 rpm.

▲ For more details circle NED-735 A4 on enclosed inquiry slip ▲

Portable Hoists

Coffing Hoist Co.—Over 100 different types and sizes of portable hoists are described in 8-page catalog CL. Items covered include both roller- and coil-chain ratchet lever hoists of ¾ to 15-ton capacities, standard and special spur gear hoists, electric and all-purpose units, small pullers for hanging on a tool belt and variety of utility maintenance tools.

▲ For more details circle NED-736 A4 on enclosed inquiry slip ▲

Fluid Control Equipment

Hoke Inc.—66-page catalog No. 2 describes and specifies complete line of small valves, pressure regulators, stainless steel cylinders, flow-gages and oxygas torches. Featured in engineering data sheets section are tabulated dimensions and line drawings on 18 straight line needle, straight line, angle and check valves; six pages of air and water flow curves; and drawings of typical gas cylinder valve threads.

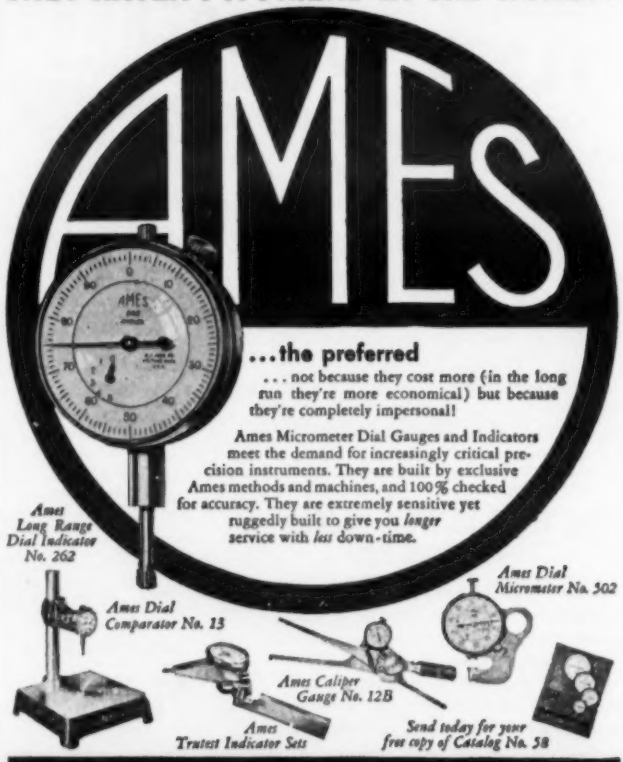
▲ For more details circle NED-737 A4 on enclosed inquiry slip ▲

Free HANDBOOK

Shows how the cost of many products has been *reduced* by replacing castings, forgings, stampings, tubing and sheet steel components with less expensive welded-wire and wire-and-strip assemblies. Also contains technical data—charts, tables, drawings, etc.—plus information on various types of production procedures, etc. Write for your copy to:
E. H. Titchener & Co.
101 Clinton St., Binghamton, N. Y.

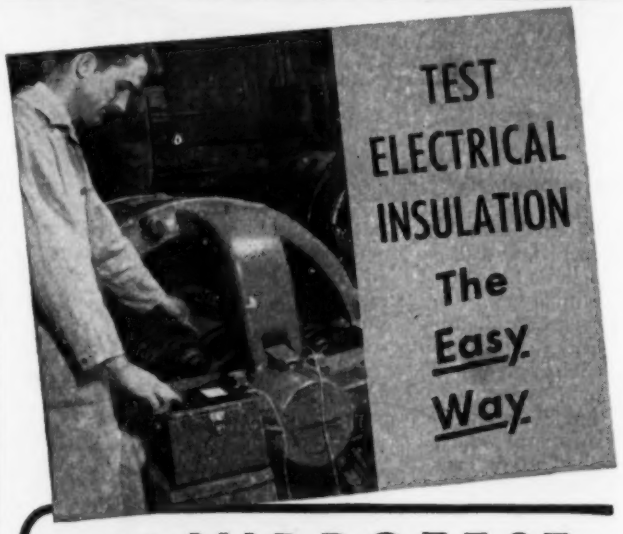
▲ For more details circle NED-738 A4 on enclosed inquiry slip ▲

THEY HAVEN'T A FRIEND IN THE WORLD!



Representatives in principal cities. B. C. AMES CO. *34 Ames Street Waltham 54, Mass.*
Mfgr. of Micrometer Dial Gauges • Micrometer Dial Indicators

▲ For more details circle NED-739 A4 on enclosed inquiry slip ▲



with VIBROTEST

TESTING your motors and other electrical equipment with Vibrotest not only saves hard manual labor; but also assures you of accurate readings at the touch of a button. Vibrotests are fully portable, rugged, and thoroughly dependable. Numerous Vibrotest Models to choose from—many with volts and ohms ranges in addition to megohm ranges. Act now to get easier, better, faster insulation resistance testing.

Write for Bulletin 2A

● Push-button operation
● No Cranking
● No Leveling
● Instant Action

ASSOCIATED RESEARCH, *Incorporated*
Precision Instruments Since 1936
3786 West Belmont Avenue, Chicago 18, Illinois

▲ For more details circle NED-740 A4 on enclosed inquiry slip ▲

Quick as a wink measure both AC and DC

WITH A COLUMBIA TONG TEST AMMETER

(Voltage attachment available)

- Both AC and DC ampere readings are made instantly and accurately without breaking circuit or scraping insulation
- Operated with one hand by merely clamping tongs around conductor
- Cannot burn out
- Scale ranges up to 1000 amperes AC or DC
- Voltage attachment reads up to 600 volts
- Five types to accommodate cables up to 3⅞", bus bars up to 4½"x½"

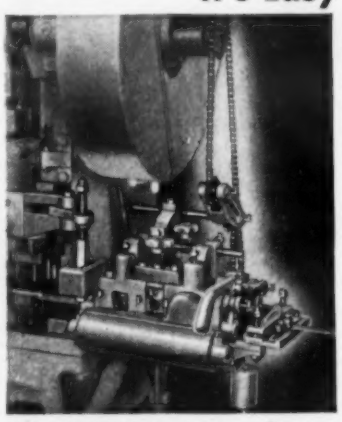
Write for Tong Test Bulletin ND-400

COLUMBIA ELECTRIC MFG. CO.
4525 Hamilton Ave., Cleveland 14, Ohio

For more details circle NED-741 A4 on enclosed inquiry slip

Get RAPID-FIRE PRODUCTION from your PUNCH PRESSES

It's Easy with WITTEK



Automatic Roll Feeds

Wittek automatic roll feeds fit all makes and sizes of punch presses — provide maximum efficiency and extreme accuracy in the high speed automatic feeding of strip stock. Made in single roll, double roll, and compound types with straighteners, in models to feed (push or pull) in any direction. Length of feed is easily adjusted to meet individual requirements.

WITTEK Reel Stands

Simplify Handling of Coiled Stock

Choice of standard models to facilitate handling coiled stock . . . from small, light coils to those weighing up to 800 pounds. Larger reel stands automatically center the coils — provide frictional braking action to prevent overrunning, maintain uniform coil slack.

Write for full particulars

WITTEK Manufacturing Co.
4325 W. 24th Place, Chicago 23, Illinois

Automatic ROLL FEEDS AND REEL STANDS

For more details circle NED-742 A4 on enclosed inquiry slip

Available For Your Use...

Practical, Fact-Filled Data Sheets give complete information on every grade of Arcos Low Hydrogen electrodes listed...*applications, weld metal analysis, mechanical properties, welding characteristics.* Write today for the Data Sheets that will guide you in the selection of the "right" electrode to produce sound high quality weld metal.

ARCOS CORPORATION
1500 South 50th St., Philadelphia 43, Pa.

For more details circle NED-743 A4 on enclosed inquiry slip

New Processes & Materials

DEFOAMING AGENT
in spray-type aerosol container

Foaming accompanying many industrial operations in which liquids or semisolids are heated or distilled can be controlled by Antifoam A, a silicone base defoaming agent. Application is from 6-oz self-spraying aerosol containers. Agent requires no mixing, is effective in trace amounts and can be easily used in confined areas. It is odorless, tasteless and physiologically inert. Du Pont Freon non-explosive liquefied gas provides the dispensing pressure. Made by **Dow Corning Corp.**, Dept. IS, P. O. Box 592, Midland, Mich.

For more details circle NED-744 A4 on enclosed inquiry slip

WATER BASE CEMENT
resists high heat and moisture

A nonflammable water base adhesive, No. 749 rubber cement is suitable for bonding paper, paperboard, cloth, insulation material, asphalt saturated felts and various composition floor coverings. It is unaffected by extreme or variable atmospheric temperatures and has good resistance to water and moisture vapor. It can be applied by brush, spray or spreader bar. When used to adhere V1 or V2 fiberboard to itself, it provides a shear strength of at least 100 psi and shows fiber failure of not less than 75 per cent of the contacted area at temperatures from −40 to 40° F. It is available in 1, 5, and 55-gal containers. Made by **Flintkote Co.**, Industrial Products Div., 30 Rockefeller Plaza, New York 20, N. Y.

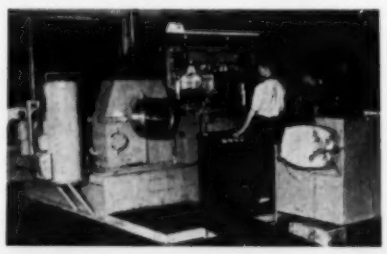
For more details circle NED-745 A4 on enclosed inquiry slip

METAL PRIMER
sandblasting and cleaning not needed

Necessity of sandblasting or other means of surface preparation are eliminated by use of primer intended for use only on rusty metal surfaces. On one application, 18 months of service has shown no visible breakdown of primer and topcoating which are based on Bakelite vinyl resins. Top photo shows group of industrial tanks before treatment with the primer. After removal of loose rust and scale, they were primed and given two coats of the Perma-Skin anticorrosion coating (bottom photo). Top coating is available in various colors for both spray and brush application. Made by **Surface Engineering Co.**, Dept. NE-9, 1535-37 Barwise Ave., Wichita 1, Kans.

For more details circle NED-746 A4 on enclosed inquiry slip

COBALT BASE ALLOY SHEET
in sheets 0.125 to 0.0005-in. thick



No. 25 (L605) Haynes alloy sheet is now being cold rolled in thicknesses down to 0.0005-in. Cobalt base alloy has high strength and hardness combined with corrosion resistance at up to 1500-2000° F. Hardnesses as high as Rockwell C-55 are being produced with ultimate strength of about 322,000 psi and an elongation of about 2 per cent. Applications include stem pads on valves handling super-heated steam, deflectors to prevent hot spots in jet engines, thin spring blades for high-temperature switching devices, diaphragms, rupture disks, and industrial knives. Made by **Metals & Controls Corp.**, General Plate Div., 1500 Forest St., Attleboro, Mass.

For more details circle NED-747 A4 on enclosed inquiry slip

For SAFETY in marking all kinds of Metal

Use SAFETY "HEVI-BEVL" LETTERS and FIGURES

The most economical all purpose grade of Safety Letters and Figures. Will give outstanding service on almost any marking job. All sizes —1/32" to 1" characters from stock. Mecco Safety Steel for No Spalling and No Mushrooming.

Write for Catalog 100.

- No Spall
- No Mushroom
- More Service
- Thumb Side Marks for easy identification

Mecco SAFETY MARKING TOOLS M.E.CUNNINGHAM CO.
1055 CHATEAU STREET, PITTSBURGH 33, PA.

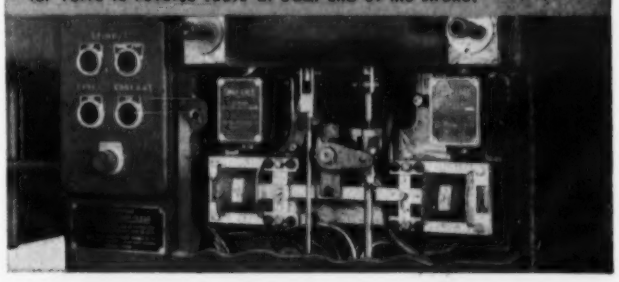
For more details circle NED-748 A4 on enclosed inquiry slip

On 15 years experience— KENT OWENS TOLEDO, OHIO has this to say:

"we specify Snap-Lock Limit Switches and Namco Solenoids on all the standard and special machines we build because of their dependable controls with trouble-free long life"

L. F. Rothert,
Director of Engineering
Machine Tool Division

On No. 2-20 Kent-Owens Production Type Milling Machine—the double limit Switch and Solenoid combination shifts hydraulic reversing valve to reverse table at each end of the stroke.



NOTHING determines the efficiency of your production equipment, and the ultimate cost of its product, so much as the often hidden but vital controls that insure its split second precision, and elimination of downtime losses.

That's exactly the function and the guarantee behind Snap-Lock Switches, designed with separate sealed off mechanical sides, and of Namco "Stellite"-Weld Solenoids. Each is a patented product.

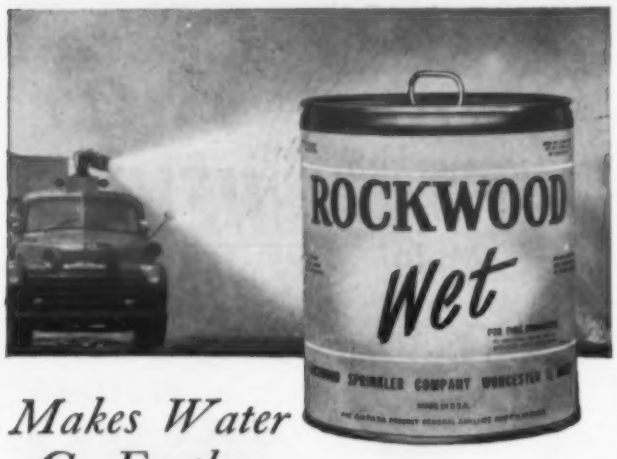
Built first to improve controls—"built with machine tool ruggedness"—for our own Acme-Gridley Automatics, these electrical devices are now specified as standard equipment by 90% of this country's machine tool builders alone. Army, Navy and Aircraft suppliers specify them used singly and in combination. Other uses in valves, clutches, switches and innumerable devices, number in thousands.

If you need to step up a cycle of operation—get rid of mechanical wear, save space and insure more dependable, continuous control of your production, ask our Engineers to help you "design one in" to your machine or process. Engineering specification catalogs—Limit Switches EM-51; Solenoid EM-52.

The NATIONAL ACME COMPANY
182 EAST 131st STREET • CLEVELAND 8, OHIO

ACME-GRIDLEY BAR and CHUCKING AUTOMATICS
1-4-6 and 8 Spindle • Hydraulic Thread Rolling Machines • Automatic Threading Dies and Taps • Limit, Motor Starter and Control Station Switches • Solenoids • Contract Manufacturing

For more details circle NED-749 A4 on enclosed inquiry slip



Makes Water Go Farther

Rockwood WET — a liquid prepared especially for fire-fighting — increases the spread and penetration of water. Used in solution of 1 part WET and 99 parts ordinary water.

Recommended for fires involving ordinary combustibles such as wood, paper, cloth. And excellent for use with WaterFOG where water is extremely scarce for fire-fighting — such as rural residences, barns, forest and grass fires, factories in outlying districts. Rockwood WET carries water into deep-seated fires in stumps, piles of leaves, duff and other spots where fires might smolder after flames have been extinguished — and where wind could fan smoldering embers into another open fire. With WET, such rekindling is reduced. Also excellent for dust control purposes.

Write for *"Fire-Fighting Products,"* Rockwood's illustrated catalog. Distributors in all principal cities.

ROCKWOOD SPRINKLER COMPANY

Engineers Water . . . to Cut Fire Losses

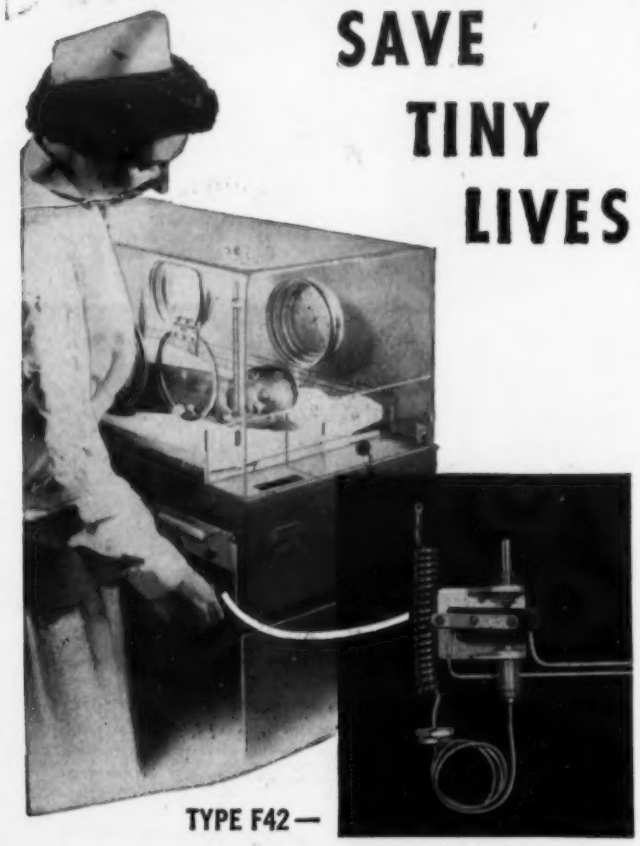
44 HARLOW STREET, WORCESTER, MASS.

▲ For more details circle NED-751 A4 on enclosed inquiry slip ▲

UE TEMPERATURE CONTROLS

. . . HELP ISOLETTE® INCUBATORS

SAVE TINY LIVES



TYPE F42 —

UE controls are used in many notable applications — but none serves a more vital function than the Type F42 Thermostat now being used in Isolette Infant Incubators.

Isolette incubators feature extremely uniform air conditioning with or without added oxygen. The Type F42 enables these units to maintain pre-set temperature control of ±1°F., within the 75° — 100°F. operating range. It also limits the temperature differential to ±2° — surpassing Children's Bureau specification. The Type F42 achieves this control by switching on or off a 250 watt heating element located in a passage of the air circulation system.

United Electric manufactures a wide line of standard controls. They are being used for controlling aircraft fuel purging systems, paper mill machinery, diesel engines, milk pasteurizers and room air conditioners. And these are but a few of the hundreds of different industrial and domestic applications where UE controls are on the job.

Special controls can either be adapted from standard models, or they can be custom-built by United engineers working in cooperation with your own product development engineers.

For additional information on the Type F42 — or the complete line of United Electric controls and their countless applications — write:

® Registered trademark. Air-Shields, Inc.

Standard and special thermostats and pressure switches

UNITED ELECTRIC CONTROLS CO.

81 School Street, Watertown, Mass.

▲ For more details circle NED-752 A4 on enclosed inquiry slip ▲

New Literature & Catalogs

Tool Tips, Dies & Wear Parts

Adamas Carbide Corp.—Three illustrated catalogs and price lists contain detailed information on standard carbide blanks, standard carbide tools and non-stocked blanks. List 853 covers threading tool blanks, carbide inserts, reamer blanks, disks, balls and solid ground cylinders, among other items. Catalog T-53 has tools in a variety of styles, while list 1053 covers an extensive line of semistandard blanks.

▲ For more details circle NED-753 A4 on enclosed inquiry slip ▲

Prefinished Metals

Apollo Metal Works—"Prefinished Metals for Modern Design" is an 8-page illustrated brochure describing six base metals offered with metallic, organic or mechanical finishes; four plating metals; plane, crimped and striped surfaces and in sheet, strip or coil form. General data, applications, properties and characteristics are outlined.

▲ For more details circle NED-754 A4 on enclosed inquiry slip ▲

Temperature Controller

Minneapolis-Honeywell Regulator Co., Industrial Div.— Newly extended range of Honeywell 077 electronic temperature controller is but one of its features described in 8-page illustrated bulletin P-811. Range is −100 to 600° F. Specifications, prices and application data on single point and cascade models are given.

▲ For more details circle NED-755 A4 on enclosed inquiry slip ▲

Woven Wire Sling

Cambridge Wire Cloth Co.—16-page illustrated data book presents salient features of Gripper slings, made of woven wire for safely handling bundled pipe and tubing and large objects such as heat exchangers, armatures and motors. Specifications are given for line made in 2 to 20-in. widths for handling up to 40,000 lb.

▲ For more details circle NED-756 A4 on enclosed inquiry slip ▲

Electric Lift Trucks

Lift Trucks, Inc.—Improvements and features of line of single stroke, multistroke and hand electric power lift trucks are described in catalog No. 35. Sizes, models and specifications are included.

▲ For more details circle NED-757 A4 on enclosed inquiry slip ▲

Face Mill & Shell End Mill

Motch & Merryweather Machinery Co.—Cross serration pattern on blade of Kroslok face milling cutter and shell end mill mates with a corresponding cross serration on the body to achieve rigid holding. Both are described in illustrated bulletin 101-CT of 8 pages. General purpose and heavy duty models are made in 3 to 24-in. and 8 to 24-in. sizes, respectively. Specs for models for steel, cast iron and aluminum machining are given.

▲ For more details circle NED-758 A4 on enclosed inquiry slip ▲

Special Machine Tools

Kearney & Trecker Corp., Special Machinery Div.— Description of the customer engineering service function of this new division is given, along with research engineering, manufacturing and sales information, in 12-page illustrated brochure. Division is devoted to manufacture of special machinery and tooling; its organization is outlined.

▲ For more details circle NED-759 A4 on enclosed inquiry slip ▲

Centrifugally Cast Pipe & Shapes

Electric Steel Foundry Co.—Applications of centrifugally cast heavy wall cylindrical stock, tubes, IPS pipe and symmetrical shapes are found in 12-page illustrated bulletin 184-A. ESCO Spuncast, as manufacturing process is known, makes use of various stainless steel analyses; heat, abrasion and corrosion resistant alloys, Ni-Resist and high alloys. Sizes and finishes offered and general data are included.

▲ For more details circle NED-760 A4 on enclosed inquiry slip ▲

Paint Sprayers & Compressors

Thomas Industries Inc., Electric Sprayit Div.— Besides data on range of portable paint sprayers and air compressors for industrial uses, 16-page illustrated catalog 53-A has information on basic features of compressor and spray gun construction and application. Recommendations as to type of feed and nozzle type for spraying various materials are given.

▲ For more details circle NED-761 A4 on enclosed inquiry slip ▲

PORTABLE MIXERS

. . . offer ECONOMY

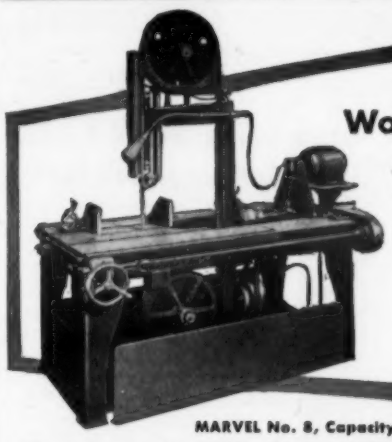
Operating expenses dip to a new low when you choose Portable Mixers from the complete Eastern Series. Available from 1/20 to 5 H.P. with a variety of speeds and motor enclosures. Your small initial investment pays rich dividends in economy.

For complete mixer selection information write for Eastern Catalog 510-A

Eastern INDUSTRIES, INC.

REGENT ST., E. NORWALK, CONN.

▲ For more details circle NED-762 A4 on enclosed inquiry slip ▲



World's Most Versatile Metal Saw

MARVEL No. 8, Capacity 18" x 18"

There is no other sawing machine like it. The work remains stationary. The blade is guided with a 90° twist and power fed vertically through the work. The saw blade and column can be instantly swung and clamped at any angle to 45° either right or left from vertical for miter cutting.

The number 8 MARVEL saw will handle the smallest, as well as the largest work up to 18" x 18". It will cut-off, trim, miter, notch, and split all bar stock, pipe, structural sections, moulding, tubing, or irregular shapes.

Write for our catalog, containing valuable information, enabling you to select a metal saw best suited to your work.

MARVEL Metal Cutting SAWS

Better Machines—Better Blades

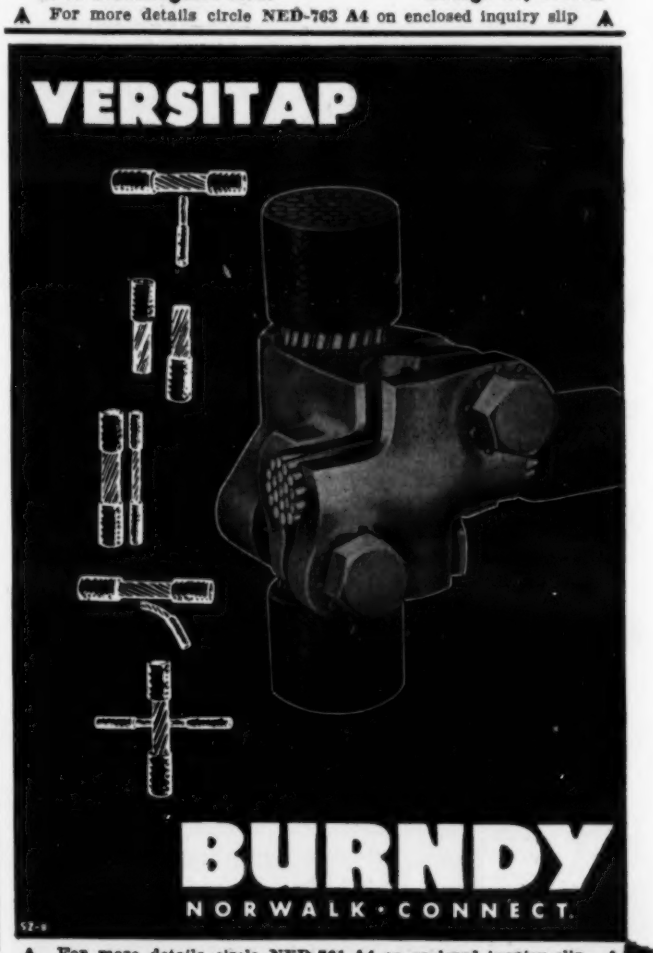
ARMSTRONG-BLUM MFG. CO.

"The Hack Saw People"

5700 Bloomingdale Ave. Chicago 39, U.S.A.

▲ For more details circle NED-763 A4 on enclosed inquiry slip ▲

VERSITAP



BURNDY

NORWALK · CONNECT.

▲ For more details circle NED-764 A4 on enclosed inquiry slip ▲

Specify Darnell

CASTERS & WHEELS

There is a type of Darnell Caster or Wheel for every kind of use and floor. Made for light, medium and heavy-duty service, you are sure to find in the Darnell line the exact caster or wheel to meet your individual requirements . .

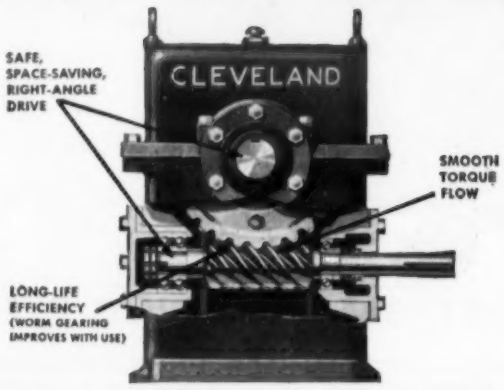
Always SWIVEL and ROLL

FREE
Darnell Manual

DARNELL CORPORATION, LTD.
DOWNEY (LOS ANGELES COUNTY) CALIFORNIA
40 WALKER STREET, NEW YORK 13, NEW YORK
36 NORTH CLINTON STREET, CHICAGO 6, ILLINOIS

For more details circle NED-765 A4 on enclosed inquiry slip

HERE'S A WORM GEAR DRIVE THAT IMPROVES WITH USE



EFFICIENCY in a Cleveland is high because bronze gear and nickel steel worm meet exact specifications precisely. Sliding action of worm on gear transmits power smoothly, quietly, with up to 50% increased resistance to shock and wear.

Run in at the factory, a Cleveland drive actually improves with use. Right-angle design saves space.

Learn other Cleveland benefits! Write for Catalog 400. The Cleveland Worm & Gear Company, 3283 East 80th Street, Cleveland 4, Ohio.

THE CLEVELAND WORM & GEAR COMPANY
Speed Reducers
Affiliate: The Farval Corporation, Centralized Systems of Lubrication

For more details circle NED-766 A4 on enclosed inquiry slip

Here's a small, sturdy new air regulator that keeps line pressures dependably accurate — at a surprisingly low cost.

It has large capacity at all pressure settings. Responds instantly to increases in demand with minimum pressure drop.

Compact, it requires little space and is easy to install. Servicing may be done with valve in the line.

Initial pressures up to 250 lbs. reduced to any pressure between 5–60 lbs.; 60–100 lbs. Sizes ¼" to ½" with brass body. 2½" gauge included.

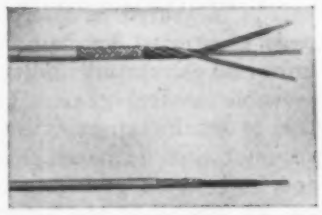
See your Mason-Neilan Industrial Distributor

MASON-NEILAN REGULATOR CO.
1189 ADAMS STREET, BOSTON 24, MASS., U. S. A.

For more details circle NED-767 A4 on enclosed inquiry slip

New Processes & Materials

MINIATURE SHIELDED CABLES
Teflon jacket offers protection



Many standard constructions, including single and multiconductor types with conductor sizes ranging from No. 20 to 30 AWG, are offered in Tensolite high temperture miniature shielded cables. They have an outer jacket of Teflon which offers protection against mechanical damage and electrically insulates the metallic shield from surrounding objects. Operation can be in range from −90 to 250° C with maximum operating voltages to 1000 v rms. Shield is woven silver plated copper braid. Outer jackets are available in ten solid colors. Made by **Tensolite Insulated Wire Co.,** 196 Main St., Tarrytown 6, N. Y.

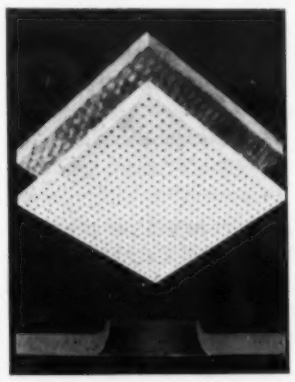
For more details circle NED-768 A4 on enclosed inquiry slip

MULTICOLOR FINISH
has tone-on-tone and spatter effects

Variety of textures in two or more colors can be applied to wood, metal and other surfaces by using color-flecked Plextone enamel. Intended for spray application from single gun in one coat, it completely covers surface flaws, and also minimizes need for sanding, sealing and filling. Large number of color possibilities, from subtle tone-on-tone to brilliant spatter effects, in wide range of colors are offered. Enamel is resistant to chipping, cracking and abrasion, and is not affected by alcohol, grease, oil and most chemicals. It can be washed and retouched easily. Plextone has a lacquer base and air dries in about 30 minutes. Multicolors or solid colors are available, as are flat or semigloss sheens, or combination of the two finishes. Standard premixed colors are stocked and custom combinations can be prepared. Made by **Maas & Waldstein Co.,** 2130 McCarter Highway, Newark 4, N. J.

For more details circle NED-769 A4 on enclosed inquiry slip

METAL ACOUSTICAL TILE
supports sound-absorbent blanket

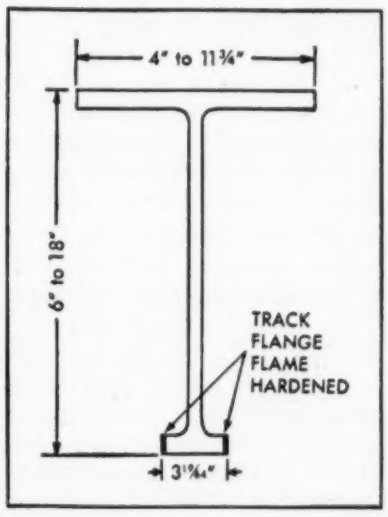


An acoustical tile of metal, Terne-coustic supports a sound-absorbing blanket of woven mineral fibers. Tile consists of terne-coated steel with a baked-on facing that can be washed and painted without impairing acoustical properties. Each tile has 529 recessed perforations. Tiles slide into place when installed with 2000 series version of standard H and T suspension system. They can be removed for access to service lines and wiring. Made by **Tach-Fast Mfg. Co.,** Dept. D-1, Lonaconing, Md.

For more details circle NED-770 A4 on enclosed inquiry slip

CRANE RAILS
available in 13 sizes

Thirteen sizes of Ohio Beamrail are made for use as straight track in Ohio Tramrail systems and as bridge beams in cranes and transfer bridges. Range of sizes permits selection of lightest proper section for each span and load. Standard 3 19/32 in. flame-hardened track on the tension flange allows any of the 13 sizes to be used interchangeably. Rail is hot rolled as a one-piece section from C-1040 high-carbon, high-manganese steel. Edges of wheel bearing tension flange are flame hardened to about 450 Brinell. Made by **Forker Corp.,** 2040 Random Rd., Cleveland 6, O.



For more details circle NED-771 A4 on enclosed inquiry slip

Bridgeport INNER-SEAL

INDUSTRY'S MULTI-PURPOSE SEALING MATERIAL

Free folder, with engineering data and specifications, tells how industries use INNER-SEAL applications to eliminate sealing problems.

Tough, flexible INNER-SEAL has many uses . . . as insulation, cushioning, gasketing . . . in the automotive, railway and refrigeration fields, and in countless other fields of manufacture. INNER-SEAL's patented construction—spring steel molded in live sponge rubber—makes an effective, pressure-tight seal. Neoprene coated INNER-SEAL is waterproof . . . resists temperature extremes, sunlight, humidity, grease, oil and abrasion. It fits snugly into corners, around curves—lasts for years.

INNER-SEAL is stocked in standard dimensions and colors. Heavy-duty type available in black. Special types or colors made to order.

INNER-SEAL is constantly solving all sorts of sealing problems. If *you* have one — why not try INNER-SEAL?

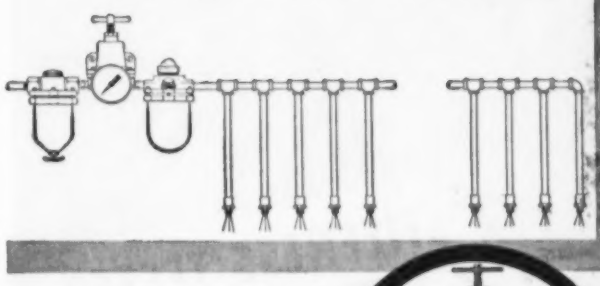
FREE SAMPLES
and complete information
WRITE TODAY

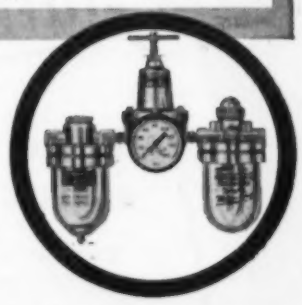
BRIDGEPORT FABRICS, INC., BRIDGEPORT 1, CONN.

For more details circle NED-772 A4 on enclosed inquiry slip

tests prove
Norgren Micro-Fog Lubricator

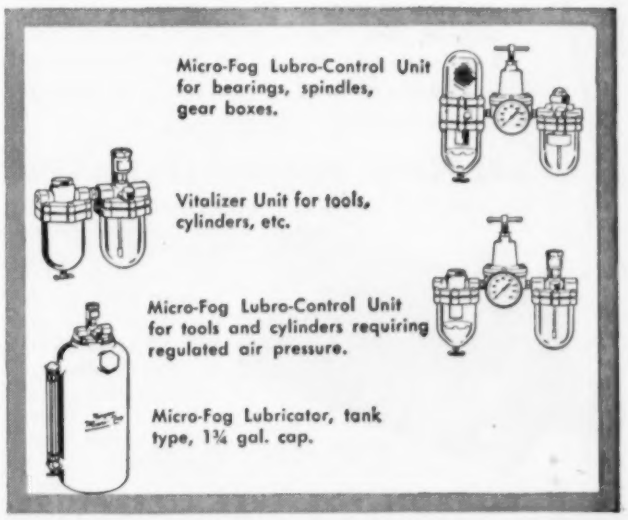
• gives absolutely uniform lubrication thru 40 outlets





The extremely fine air-borne Micro-Fog provides absolutely uniform distribution of lubricant through as many as 40 outlets...for bearings, spindles, gear boxes, etc.

Two exclusive features of the Norgren Micro-Fog Lubricator—constant oil level and metering of oil feed by air—assure an exactly uniform and accurately regulated rate of feed.



PIONEER AND LEADER IN OIL-FOG LUBRICATION FOR 26 YEARS

Valves • Filters • Regulators • Lubricators • Hose Assemblies

WRITE FOR NEW CATALOG No. 600

C. A. Norgren CO.
3405 So. Elati, Englewood, Colo.

For more details circle NED-773 A4 on enclosed inquiry slip

if the load is light
screen it right
with a MIGHTY-MITE

SINGLE & DOUBLE DECK MODELS
Now, throw away time consuming hand screens. Mighty-Mite will efficiently, economically screen coarse or fine materials up to 15 tons per hour. Send for literature today.
Makers of Famous Seco Vibrating Screens

SCREEN EQUIPMENT CO., INC.
BUFFALO 25, NEW YORK

For more details circle NED-774 A4 on enclosed inquiry slip

NEW

STIFFNESS TESTER

- with 8 TEST RANGES
- DIRECT DIAL READINGS

Designed to determine both the initial and basic stiffness of sheet and wire specimens, this improved ultra-sensitive model has *eight* test ranges instead of six. Now, the flexural rigidity of very thin materials such as cellophane and metal foil can also be determined with the SR150-14 attachment which magnifies dial readings 100 times. Test length, angle of deflection and rate of loading are all standardized for accurate test results between laboratories. Readings taken direct from dial. No calculations necessary! Send coupon for folder giving details and prices!

ABRASION RESISTANCE TESTER
Simulates ACTUAL abrasion and wear conditions during test and gives ACCURATE numerical index for your report. Recognized the world over as the STANDARD for testing plastics, rubber, textiles, paint and linoleum. Send coupon below for free booklet!

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☐ Please send me booklet on Taber Stiffness Tester
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NAME .....
COMPANY .....
ADDRESS .....
CITY ..... ZONE ..... STATE .....

For more details circle NED-775 A4 on enclosed inquiry slip

New Literature & Catalogs

Electronic Punch Card Computer

Remington Rand Inc.—Full details on the electronic punched card computer which operates at speeds measured in microseconds are provided in 6-page illustrated brochure TM842. Machine features universal calculating ability, flexible programming, removable control panels, built-in automatic verification of results, alphabetical reproduction, summarized accumulation, sequence checking, dual-control sorting and high speed punching of results.

For more details circle NED-776 A4 on enclosed inquiry slip

Rubber Product Production

Goshen Rubber Co.—Company's facilities for producing quality rubber products through engineered compounds are outlined in 4-page file folder form. Literature highlights O-rings for hydraulic and pneumatic applications made to MIL and commercial specifications from synthetic and silicone rubber compounds.

For more details circle NED-777 A4 on enclosed inquiry slip

Propeller Fans

Hartzell Propeller Fan Co.—Three new models are among the 13 types of propeller fans shown in 44-page bulletin A-109. These are a panel fan, a high pressure fan and a direct drive Lo-Noise fan. Bulletin also describes three types of roof ventilators, unit heaters and intake air units. In addition to specifications and dimensions, it features a discussion of corrosion-resistant materials and coatings.

For more details circle NED-778 A4 on enclosed inquiry slip

Ultrasonic-Cleaning

General Electric Co.—How the ultrasonic generator works, the principles of high-frequency sound cleaning of parts and examples of present applications are explained in 4-page bulletin GEA-6056. Cleaning is hastened by as much as 100 times by ultrasonic action of generator.

For more details circle NED-779 A4 on enclosed inquiry slip

Precision Measuring Instruments

DoALL Co.—The Tumico line of precision measuring instruments is cataloged in 36-page literature piece 51-810. Full details are given on the Tubular Micrometer series—a lightweight, easy-to-handle micrometer with tubular, vacuum-sealed frame. A vast array of micrometers is described as well as hundreds of other items including dial indicators, height gages, comparators and depth gages.

For more details circle NED-780 A4 on enclosed inquiry slip

Dynamotors

Carter Motor Co.—Issued as a companion piece to the recent catalog No. 553, 28-page illustrated catalog 753 offers complete electrical and mechanical specifications on Carter Dynamotors, including performance and oscillograph charts and dimension diagrams. New items shown include Change-a-Volt Dynamotors as well as the heavy duty Genemotor.

For more details circle NED-781 A4 on enclosed inquiry slip

V-Link Belting

Brammer Corp.—Readers can be brought up to date on latest developments in improved Brammer V-Link belting by data book B220. It gives complete engineering and application data, and makes wide use of color, illustrations, tables and charts to clarify the material.

For more details circle NED-782 A4 on enclosed inquiry slip

Variable Transformers

Standard Electrical Products Co.—Design and construction details, dimensions and performance characteristics of various models of auto, isolated and metered variable transformers for built-in and bench applications are found in 18-page illustrated catalog 553-5. Technical data are given.

For more details circle NED-783 A4 on enclosed inquiry slip

Acoustical Luminous Ceilings

Luminous Ceilings Inc. — Economies effected through use of the plenum above an Acusti-Luminus ceiling in air conditioning and heating are expounded upon in 16-page illustrated brochure. Ceiling also assures glare-free lighting. An opening at each side of the corrugated Lumi-Plastic sheet provides equal distribution of heated or cooled air. Brochure covers design data and laboratory tests and shows layout options.

For more details circle NED-784 A4 on enclosed inquiry slip

NEW MINIATURE PRECISION HYDRAULIC VALVE

Skinner's new V10 Series Miniature Hydraulic Valve is an amazingly compact unit, capable of handling pressures up to 1000 P.S.I.

This precision-made valve is ideally fitted for use in the automatic operation of single and double acting hydraulic cylinders, and in pilot control of larger three and four way hydraulic valves.

The V10's construction is consistent with the Skinner quality tradition: most internal parts are of stainless steel; the slide mechanism has a precision-ground piston, and a bore honed to extremely close tolerance, thus minimizing leakage.

Specifications: 1/8" NPT threaded ports; effective orifice diameter of 3/32"; available in the full range of AC and DC voltages.

The economical design and unusually small size of the Skinner Miniature Hydraulic V10 valve will enable many manufacturers to install it in places where, heretofore, remote control devices have been considered impractical. *Write for Bulletin #529.*

Skinner ELECTRIC VALVE DIV.
THE SKINNER CHUCK COMPANY
112 Edgewood Ave., New Britain, Conn.

For more details circle NED-785 A4 on enclosed inquiry slip

PORTABLE STRAPPING REEL

- You can easily move this Brainard steel strapping reel from job to job and speed up packaging operations.

Holds a standard size continuous coil of tensional strapping, which is easily placed in demountable coil holder.

Tray holds tools and seals within convenient reach of operator. Brainard's complete line of steel strapping, tools and accessories covers all packaging, carloading, palletizing, bundling, export crating and warehousing requirements. Write for illustrated catalog.

Brainard
STEEL DIVISION
SHARON STEEL CORPORATION

For Catalog write:
BRAINARD STEEL DIVISION
Griswold Street, Dept. HH-1
Warren, Ohio

For more details circle NED-786 A4 on enclosed inquiry slip

BRADY QUIK-LABEL PIPE MARKERS

FAST... POSITIVE IDENTIFICATION

For a few cents per pipe, you can equip your entire plant with Brady QUIK-LABEL Pipe Markers. You can get a uniform system of pipe identification based on A.S.A. Standard A13. Names of materials printed in large black letters on correct A.S.A. background colors — no hand stenciling, painting, or hard to remember codes. Anyone who can read can tell at a glance the pipe contents and direction of flow. Over 235 different markers and direction arrows in stock. Specials made to order.

Brady QUIK-LABELS stick without moistening—applied in a jiffy, Silicone Plastic treated to resist dirt, grime, moisture—for indoor or outdoor service.

Brady Pipe Markers leave no room for doubt . . . or TRAGEDY.

WRITE FOR Free SAMPLES AND USEFUL CATALOG

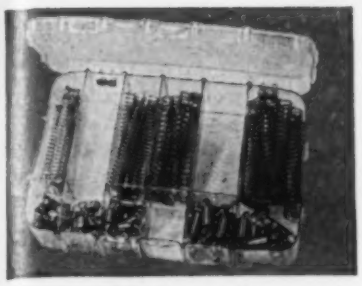
DISTRIBUTORS IN OVER 125 PRINCIPAL CITIES

MANUFACTURERS OF SELF-STICKING PRODUCTS
W. H. BRADY COMPANY
736 W. Glendale St. • Milwaukee 12, Wis.

For more details circle NED-787 A4 on enclosed inquiry slip

THE RIGHT BOX CAN DO A JOB FOR YOU

Small parts handling made easier, cleaner and more efficient with—
Lite-TUFF PLASTIC BOXES



Lite-TUFF Standard Boxes and Containers of Non-Flam* light-weight plastic made of approved material are no fire hazard. They are available in a wide variety of compartment arrangements. LOW DIE COST ON CUSTOM MADE.

- Very tough—will not crack or shatter in normal use.
- Stainless steel hinges.
- Resistant to most chemicals—samples supplied for tests.
- May be beautifully heat embossed.
- All transparent or color combinations.
- Make your own compartment layout on our PLOT PLAN Sheets.
- State your problem—let us solve it.

Full information and Plot Plan Sheets sent upon request . . . Dept. B1
*Reg. U. S. Pat. Off.

SHOE FORM CO. INC., Auburn, N. Y.

For more details circle NED-788 A4 on enclosed inquiry slip

What tool room men say about the new G BOND wheels

"Now with a G Bond wheel we can go completely around a 16-inch face mill," writes a tool supervisor. "Due to wheel wear we used to index this cutter at four different points."

"Good finish, longer wheel life."
"Heavier feeds without burn."
"Run absolutely true."
"No breakdown — no jagged edges."
"Cut freely, hold shape with no burning."
"They show how a real wheel will cut."

Norton G Bond wheels in your own tool room will bring these same value-adding, money-saving "Touch of Gold" advantages to every job they do. They'll reduce tool spoilage, give you closer tolerances and smoother finishes than you ever got before — with fewer wheel changes and machine adjustments.

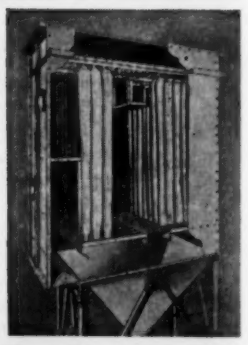
See your Norton Distributor for these faster, cooler-cutting wheels in the greatest vitrified bond ever produced. Or write to NORTON COMPANY, Worcester 6, Mass. Distributors in all principal cities. *Export:* Norton Behr-Manning Overseas, Inc., Worcester 6, Mass. W-1533

NORTON ABRASIVES
Making better products... to make other products better

For more details circle NED-789 A4 on enclosed inquiry slip

NEW DEVELOPMENTS *that mean* NEW SAVINGS *in DUST CONTROL*

New synthetic filtration fabrics have extended the economies of Dustube dust control to the handling of hot and/or corrosive gases. This means that the savings in initial and maintenance costs and the high efficiency of Dustube cloth tube type collectors can now be applied to many more dust control problems.



Dustube's new ultra filtration principle permits the collection of even dust you can't see — providing super clean air for a fraction of the cost of other methods.

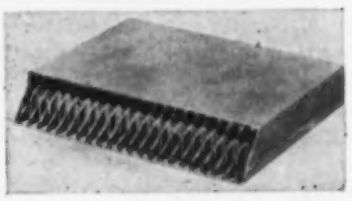
For any dust or fume control problem, a Dustube Collector provides the highest efficiency at lowest cost. Send today for Catalog No. 372.

American WHEELABRATOR & EQUIPMENT CORP. | 508 S. Byrkit St., Mishawaka, Indiana

For more details circle NED-790 A4 on enclosed inquiry slip

New Processes & Materials

CELLULAR PANELS for wide variety of structural and architectural applications



Two outer sheets of embossed aluminum bonded with heat and pressure to a core made of resin-impregnated paper formed into a figure-eight construction comprise Reynocell sandwich-type panels. Application can be to a variety of products, including desk tops, movable partitions, catwalks, doors, refrigerator cars, freight car doors, cabinets, heat shields and baffles, loading ramps and pallets.

Material is available in sizes up to 57 in. by 16 ft and in thicknesses from 1 to 4 in. Panels are strong and rigid in relation to their light weight and have good thermal and acoustical insulation qualities. Natural aluminum, lacquered, enameled and plain or color anodized surfaces are available, along with various embossed patterns. One-inch thick panel weighs 1.01 lb per sq ft. Made by **Reynolds Metals Co.**, 2552 S. Third St., Louisville 1, Ky.

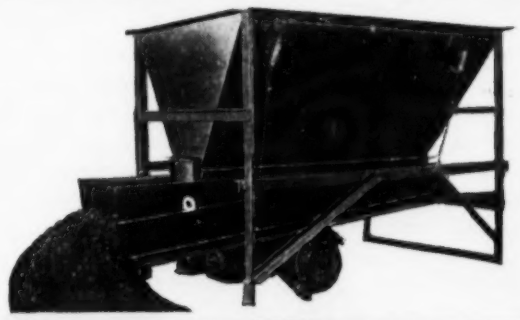
For more details circle NED-791 A4 on enclosed inquiry slip

HARDBOARD PRODUCTS heat and pressure-formed, now in 13 types, 38 thicknesses

Total of 13 Weldwood Hardboard products in 38 thicknesses are now offered to industry as result of 10 new types recently added to line. Six types classed as dealer-grade products are: Walltuf low-density all purpose panel in 3/16 and 1/4-in. thicknesses; Underlayment, a 0.215-in. panel for use on floors under tile, linoleum, cork and carpeting; Black Tempered Hardboard, a black dyed tempered-grade panel in thicknesses of 1/10, 1/8, 3/16, 1/4 and 5/16-in. and useful as a work surface; Siding, a tempered grade panel in 12, 16 and 24-in. widths, lengths of 8 ft or longer and thicknesses of 1/4 and 5/16-in.; Tempered Dekalux, smooth on both sides and in 1/8, 3/16 and 1/4-in. thicknesses; and Dekaleather, 1/8-in. tempered panel with one side embossed, the other smooth.

New industrial-grade Hardboards include Standard Dekalux, both sides smooth, 1/8 and 3/16-in. thick; Chest Tempered Hardboard, panel tempered by two processes for added strength in 1/10, 1/8, 3/16, 1/4 and 5/16-in. thicknesses; Dekadoor 1/8-in. panel for making flush doors; and Laminated Hardboard, a two to six-ply lamination. Standard and tempered Hardboards are now offered in 1/10 and 5/16-in. thicknesses in addition to 1/8, 3/16 and 1/4-in. thicknesses previously available. Made by **United States Plywood Corp.**, 55 W. 44th St., New York 36, N. Y.

For more details circle NED-792 A4 on enclosed inquiry slip



If you use bin-stored materials you can handle them better with a Simplicity Os-A-Veyor type bin feeder

If you move anything that can be stored in a bin, chances are a Simplicity Os-A-Veyor type bin feeder will cut handling costs and speed up your operations. Simplicity Bin Feeders practically eliminate bridging and stoppage because they feed from the full length of the bin—materials will flow as you need them. Simplicity bin feeders are ideal, too, for storing and moving materials that are improved by tempering. Simplified power and operating mechanism keeps maintenance costs low, makes servicing easy. Write us today for complete information.

101
Simplicity ENGINEERING CO., DURAND, MICH.

For more details circle NED-793 A4 on enclosed inquiry slip

Here's something NEW in straight-form thermometers

THEY OFFER THESE OUTSTANDING PLUS FEATURES

DURABILITY — All parts of the new Rochester straight-form thermometers (except crystal) are of corrosion-resistant stainless steel. All are fused into a single unit by an exclusive welding process. Hermetic sealing assures easy reading of dial under any operating condition. No clouding.

EXTERNAL RECALIBRATION — Only Rochester thermometers can be recalibrated externally. A screw adjustment permits you to restore accuracy even if you knock the thermometer out of adjustment with a hard blow.

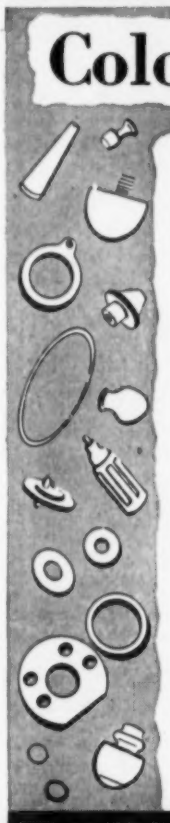
SELECT YOUR STEM POSITION — This thermometer is ordinarily supplied with the stem located at the bottom. However, it can be placed at the location you desire around the entire dial circumference. Available in stem lengths from 2½ to 48 in. **Rochester Manufacturing Company, Inc., 114 Rockwood Street, Rochester 10, N. Y.**

See this new straight-form thermometer at the 24th Exposition of Chemical Industries, Commercial Museum and Convention Hall, Booth 422, Philadelphia, Nov. 30 to Dec. 5, or write for further information.

Rochester MANUFACTURING COMPANY, INC.
DIAL THERMOMETERS · GAUGES · AMMETERS

For more details circle NED-794 A4 on enclosed inquiry slip

Colonial Develops SPECIAL RUBBERS



FOR *Tough* INDUSTRIAL APPLICATIONS

CONSULT OUR ENGINEERS ON YOUR RUBBER PARTS PROBLEMS AT NO OBLIGATION

The Colonial Rubber Company has the experience, the technical staff, and the facilities to meet your *special* requirements in industrial rubber parts. Our service is fast, efficient and precise for three important reasons:

Colonial Operates Its Own
- **RUBBER RESEARCH LABORATORIES**
- **DIE-MAKING MACHINE SHOP**
- **PARTS PRODUCTION PLANT**

Send for Free Illustrated Booklet
Contains complete details on Colonial's custom rubber compounding and molding . . . shows *why* manufacturers can use this service to advantage. 2300

Colonial Rubber Co.
Ravenna, Ohio

For more details circle NED-795 A4 on enclosed inquiry slip

In 1 minute

The Verifax method, Kodak's sensational new office aid, gives you—

3 copies

of any letter or other office record—legible, dry, photo-exact—and made . . .

on ordinary paper

instead of on specially treated paper. These 3 copies are produced from but *one* sheet of Verifax Matrix Paper for

only 4¢ apiece

which is real copying economy!

Only equipment needed is the compact Verifax Printer . . . priced at low $240. Amazingly simple to operate . . . can be used under present lighting.

Save now! Write for free Verifax booklet and names of near-by dealers.

EASTMAN KODAK COMPANY
Industrial Photographic Division
Rochester 4, N. Y.

Price quoted is subject to change without notice.

Kodak

For more details circle NED-796 A4 on enclosed inquiry slip

▲ For more details circle NED-798 A4 on enclosed inquiry slip ▲

McGILL MANUFACTURING CO., INC. 101 N. Lafayette St. Valparaiso, Indiana

▲ For more details circle NED-799 A4 on enclosed inquiry slip ▲

Actually a handy, 48-page manual for your desk or file. Describes and diagrams Titeflex® Seamed and Uniflex Seamless Metal Hose, standard and special fittings, couplings, typical assemblies—with tabulated specifications for easy ordering. Engineering data include working pressures, flow rates, frictional losses, how to install and care for flexible metal hose. Send coupon for your copy. No obligation.

Titeflex

TITEFLEX, INC.
507 Frelinghuysen Avenue, Newark 5, N. J.
Please send me your new Titeflex Flexible Metal Hose Catalog No. 200.
Name
Title
Company
Address
City Zone State

▲ For more details circle NED-800 A4 on enclosed inquiry slip ▲

New Literature & Catalogs

Plastic Label Tapes

Labelon Tape Co.—Use of Labelon tape in the office, factory, store and laboratory is graphically described in 4-page form 11. Featured item is the plastic, self-sticking Write-On-It tape, which when written upon with any blunt pointed instrument, produces a smudge-proof message. Versatility of tape is shown.

▲ For more details circle NED-801 A4 on enclosed inquiry slip ▲

Water Coolers

Ebco Mfg. Co.—Water coolers with 2 to 35-gallon per hour capacities are detailed in 8-page illustrated catalog 27d/Eb. Among Oasis models listed are those for use with plumbing, bottle type, coolers with cold storage compartments and ice cube trays, explosion-proof coolers, cafeteria coolers and heavy duty industrial coolers. Selection data are given.

▲ For more details circle NED-802 A4 on enclosed inquiry slip ▲

Small Cold Drawn Tubing

J. Bishop & Co., Platinum Works—Cold drawn mechanical, capillary, hypodermic and other stainless steel tubing from 0.008 to 1 in. OD; nickel and nickel alloy tubing; and small tubular specialties are subject matter of 8-page illustrated bulletin. Comparative analysis of alloy types, specifications, tolerance tables and physical properties are included.

▲ For more details circle NED-803 A4 on enclosed inquiry slip ▲

Stainless Welded Products

Stainless Welded Products, Inc.—Large diameter, corrosion resistant pipe, tubing and welded fittings are described in 24-page illustrated catalog. Sections on special metals, alloys, grades, finishes, standard tolerances and dimensional charts are included. Engineering data tables also available cover such subjects as corrosion resistance of nickel alloys, beam formulas, pipe flow data and fluid-flow-friction losses.

▲ For more details circle NED-804 A4 on enclosed inquiry slip ▲

Standard Metal Boxes

Zero Mfg. Co.—In 20 illustrated pages, catalog No. 4 lists and describes more than 750 precision seamless deep drawn boxes and cans in aluminum, steel and brass available from standard tooling. Electronic chassis and cabinets are among the uses to which these products are put. Smooth satin finish and close tolerances are feature of the line.

▲ For more details circle NED-805 A4 on enclosed inquiry slip ▲

Oil & Solvent Reconditioners

Mayhew Products Co.—Three models of oil and solvent reconditioner are shown in 4-page illustrated bulletin. Units are portable, with various filtering elements to suit a particular service. They have flow ratings up to 20 gpm of reconditioned fluid.

▲ For more details circle NED-806 A4 on enclosed inquiry slip ▲

Reproduction Templets

Repro-Templets Inc.—All two-dimensional adhesive-backed templets used for plant layout described in 54-page illustrated catalog are prepared from data furnished by machine and equipment manufacturers. It lists templets of all machine tools, shop, office and materials handling equipment, etc., plus grid sheets and accessory material available. Scale is ¼-in. Prices are given.

▲ For more details circle NED-807 A4 on enclosed inquiry slip ▲

Abrasive Belt Grinding

Minnesota Mining & Mfg. Co.—12-page illustrated brochure "The 3M Method of Belt Grinding and Finishing" shows coated abrasive belts in use on a variety of equipment for grinding and finishing flat and contoured surfaces on materials ranging from tungsten carbide to hard rubber. Advantages are listed as fast cutting, cool operation, economy and low unit costs.

▲ For more details circle NED-808 A4 on enclosed inquiry slip ▲

Eye & Head Protection

Chicago Eye Shield Co.—In 64 illustrated pages, catalog No. 27 shows a wide variety of industrial protective equipment for eye and head. Various items described include safety glasses and goggles, welding helmets, face shields, respirators, masks, hoods, aprons, sleeves and grinder guards. Replacement parts for the units are also shown and described.

▲ For more details circle NED-809 A4 on enclosed inquiry slip ▲

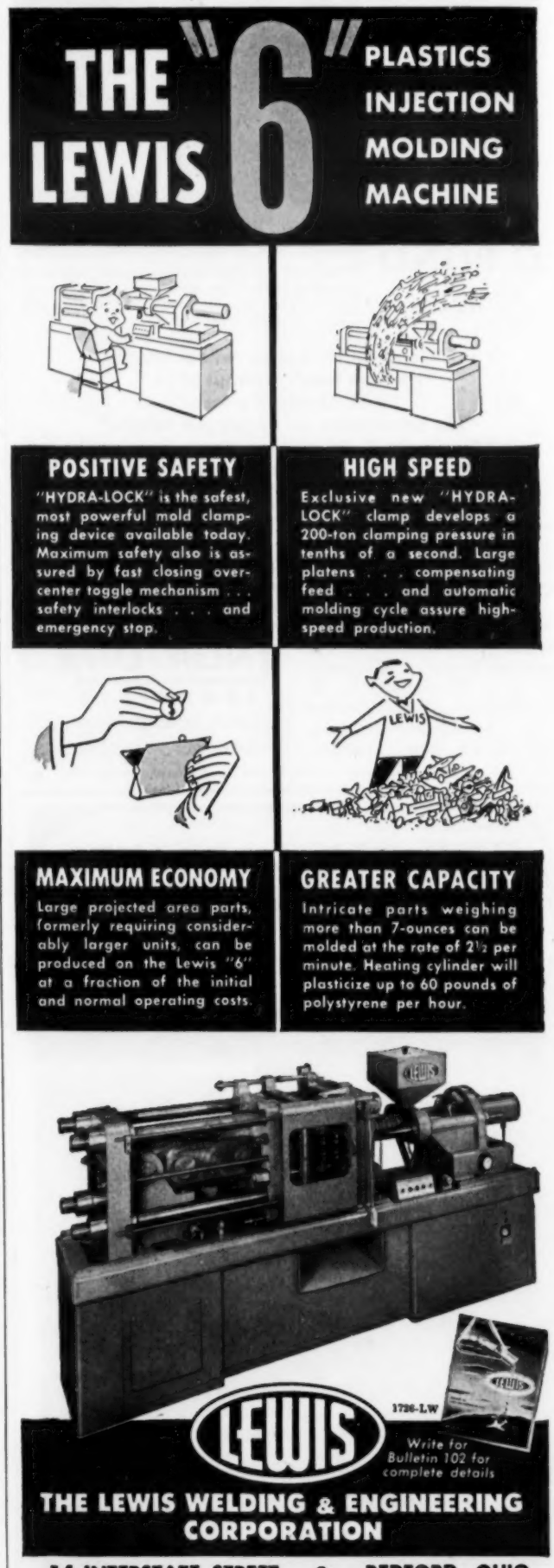
Buying fabricated parts direct from the redraw mill saves time and money because, like any pre-fabrication, it eliminates extra handling costs, reduces transportation charges and speeds deliveries.

J. Bishop & Co. is the only redraw mill that specializes in fabricating tubing. Their 111 years experience fabricating precious metals, and over 20 years drawing and fabricating stainless steel tubing, assure you precision fabrication and quality craftsmanship.

Whether you require stainless steel tubing, or fabricated tubular parts, specify Bishop for quality and economy.

J. BISHOP & CO. *Platinum Works*
Stainless Steel Division, Malvern, Penna.

▲ For more details circle NED-810 A4 on enclosed inquiry slip ▲



14 INTERSTATE STREET • BEDFORD, OHIO

▲ For more details circle NED-811 A4 on enclosed inquiry slip ▲

U.S. Royal Cords and Cables

Safety Tested!

Flexibility · Dielectric Strength
Smooth finish · Physical toughness

UNITED STATES RUBBER COMPANY
Electrical Wire and Cable Department
Rockefeller Center, New York 20, N. Y.

▲ For more details circle **NED-812 A4** on enclosed inquiry slip ▲

Hold that wiring with these all Nylon cable clips

- ✶ Lightweight ✶ Tough ✶ Strong
- ✶ No metal to corrode or cause short circuits
- ✶ Easy to apply ✶ No sharp edges
- ✶ Chemically resistant
- ✶ May be used from −60° to 250° F.

Send for samples and literature

WECKESSER COMPANY
5251 N. Avondale Ave. ★ Chicago 30, Illinois

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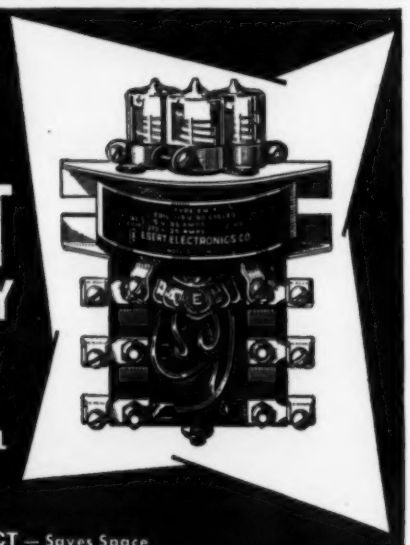
EBERT MERCURY RELAYS

for POWER CONTROL FUNCTIONS



- COMPACT — Saves Space
- EASILY INSTALLED — Saves Time
- LONGER LIFE — Saves Cost
- SILENT and CHATTERLESS — Eliminates Noise
- HERMETICALLY SEALED — Explosion Proof
- MERCURY-to-MERCURY CONTACTS — No Burning, Pitting or Sticking — *And Unaffected By Moisture, Dust or Temperature Changes!*

FOR 1, 2 or 3 POLE OPERATIONS NORMALLY OPEN OR NORMALLY CLOSED

Catalog Available On Request

EBERT ELECTRONICS CO.
212-26 G Jamaica Avenue
Queens Village 28, L. I., N. Y.

▲ For more details circle **NED-814 A4** on enclosed inquiry slip ▲

New Processes & Materials

WIRE REINFORCED HOSE for industrial vacuuming use

Smooth bore Flex-Vac lightweight wire-reinforced thermoplastic hose is designed for heavy duty industrial vacuum cleaning applications. It is flexible and abrasion resistant and offers good visibility from a distance as a safety feature. Made by **Flexible Tubing Corp.**, 10 N. Whitfield St., Guilford, Conn.

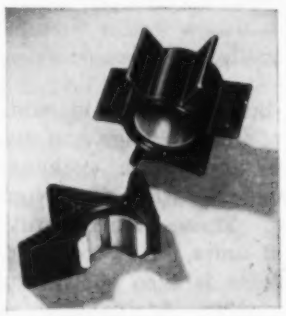
▲ For more details circle **NED-815 A4** on enclosed inquiry slip ▲

X-RAY PROCESSING CHEMICAL saves time and preserves films

Used after the fixing process, Fixer-Neutralizer X-ray film processing solution reduces washing time to 5 minutes and at the same time neutralizes films so that they can be kept for years without danger of staining. Despite fact that it is an additional process requiring 5 minutes to perform, it results in an overall saving of a least 20 minutes, both by reduction of washing time and, because films are not saturated with fixer or water, a reduction in subsequent drying time. Mixed 4:1 with water, 1 gallon of the compound effectively processes about 2000 14 x 17-in. films. Made by **General Electric Co.**, X-Ray Dept., Dept. DG, 4855 Electric Ave., Milwaukee 1, Wis.

▲ For more details circle **NED-816 A4** on enclosed inquiry slip ▲

BONDING PROCESS joins rubbers to other materials



Process assures bonding of Buna N and Neoprene rubbers to Zamac materials, white metals, aluminum and nylon. Rubber-to-metal process is being used to produce phonograph drive wheels, and a nylon-to-rubber technique is expected to eliminate need for metal inserts where nylon is used as a bearing for rubber parts. Information is available from **Minnesota Rubber & Gasket Co.**, Dept. KP, 3630D Wooddale Ave., Minneapolis 16, Minn.

▲ For more details circle **NED-817 A4** on enclosed inquiry slip ▲

WATERLESS HAND CLEANER antiseptic for sensitive hands

Antiseptic properties (2 per cent hexachlorophene) are formulated into Sulpho waterless hand cleaner for protecting workers with naturally dry or sensitive skins. Cleaner is made of sulphonated vegetable oils which are often used in treatment of industrial dermatitis. Sulphonation converts oils into emulsifying agents that remove dirt and grease from skin. Cleaner also contains relatively high amount of unsulphonated vegetable oil which acts as an emollient and keeps skin from becoming defatted or dried out. Developed by **West Disinfecting Co.**, Dept. DE, 42-16 West St., Long Island City 1, N. Y.

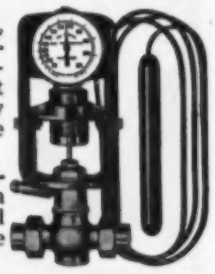
▲ For more details circle **NED-818 A4** on enclosed inquiry slip ▲

POWDERED FLUX for welding aluminum bronze

Usable primarily in welding Ampco 8 and other aluminum bronze sheet and plate, Ampco-Weld powder flux can be used with both the inert gas processes and all grades of Ampco-Trode filler rods. It insures removal of oxides from the weld metal and improves deposit flow into side walls of the joint. Full penetration is secured in straight butt joints at low current and preheat values. Flux is designed for alcohol-mix application. Made by **Ampco Metal, Inc.**, Dept. 1-54, 1745 S. 38th St., Milwaukee 46, Wis.

▲ For more details circle **NED-819 A4** on enclosed inquiry slip ▲

Cut Cost of METAL FINISHING With POWERS NEW Temperature REGULATOR



For Plating, Anodizing, Bonderizing, Pickling, Cleaning, Rinsing, and Chromate Dips. Powers No. 11-MF Regulators will help you get the most effective use from various solutions by holding them at the right temperature automatically.

Plastic Covered Thermal Bulb and Tubing—is highly resistant to solutions in above processes. Prevents electrical shorts. No insulators required for the regulator.

Easy to Read 4" Dial Thermometer—indicates temperature of liquid being controlled and makes it easy to adjust regulator for different temperatures. (b51)

Bulletin 330 describes this simple, dependable control.

THE POWERS REGULATOR CO., SKOKIE, ILL.
Offices in over 50 Cities, see your Phone Book • Established in 1891

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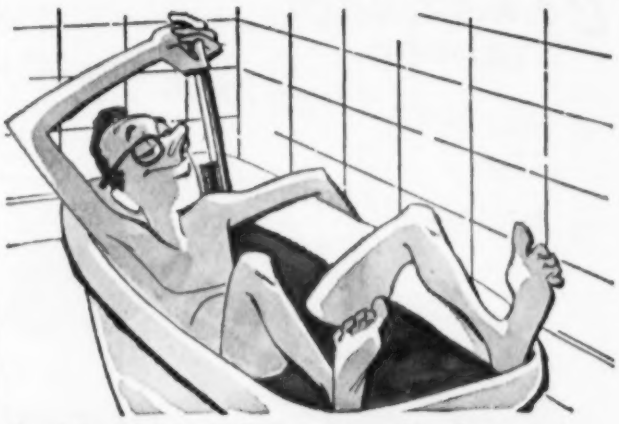
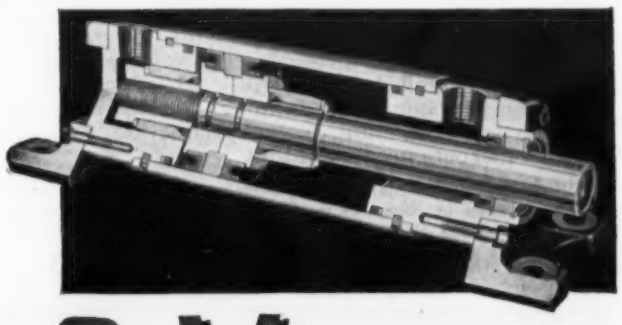


in those hard-to-reach places...



O-M (air · hydraulic) CYLINDERS

fit where others won't!

O-M's SPECIAL INTERLOCKING MECHANISM, which does away with projecting tie rods and end caps, answers the old problem of how to get the necessary power when space is a factor. O-M Cylinders require ⅓ *less installation space* than conventional cylinders with the same bore . . . and can be turned down to fit easily into the deep recesses of machine bases and equally hard-to-reach spots. They're ALL-STEEL with bearing bronze—no castings.

And O-M has the lowest coefficient of friction of any cylinder . . . smoother operating at low or high speeds regardless of length of stroke. End plugs tapped for universal mounting. Any one or combination of mounting brackets may be used to install *without disassembling or changing cylinder.* Easily removed, inspected, repaired.

Available in a full range of sizes (1½ to 8" bores) with standard, 2 to 1 or oversize rods. Completely interchangeable parts.

Write today for FREE catalog and complete set of ½- and ¼-scale templates showing all cylinders and mounting brackets.

14 day delivery on most sizes

MAIL COUPON TODAY!

ORTMAN MILLER MACHINE CO.
1222 150th Street • Hammond, Indiana
☐ Please send latest O-M catalog. ☐ Complete set of templates.
Name.....
Company.....
Address.....
City.....Zone.....State.....

▲ For more details circle **NED-821 A4** on enclosed inquiry slip ▲

LOGAN AIR AND HYDRAULIC POWER
SPEEDS • COORDINATES • REFINES PRODUCTION
IN OVER 10,000 INDUSTRIAL PLANTS

Logan
AIR-DRAULIC® FEED-CONTROLLED CYLINDERS
COMBINES
the fast-acting, economical low-pressure operation of
AIR
with the smooth, uniform controlled regulation of
OIL
5 STANDARD MOUNTING TYPES
Standard bores from 3" to 8". Standard strokes to 5'.

LOGAN MANUFACTURES 6,975 STANDARD CATALOGED ITEMS • CATALOG ON REQUEST
Let Logan Engineers help you design your Air and Hydraulic Circuits.

LOGANSPORT MACHINE CO., INC.
808 Center Avenue Logansport, Indiana

For more details circle NED-822 A4 on enclosed inquiry slip

Commander TAPPER
★ Wider Range...1 Tapper Handles #0 to 3/4" Taps
★ Automatic Tap Protection

★ Furnished to fit any Drill Press

Commander—"The Tapper That Thinks For Its Operator," has the adjustable full range torque control that instantly stops any tap when it becomes dull, loaded, strikes a hard spot or bottoms in blind hole tapping. Assures maximum tap protection, higher production, even with inexperienced operators.

Your nearby Commander Distributor can give you a demonstration in your own plant. Write for his name and a copy of the NEW Commander Full Line Catalog #851

COMMANDER MFG. CO.
4220 W. Kinzie St. Chicago 24, Ill.

Product of Commander... Builder of Production Tools

For more details circle NED-823 A4 on enclosed inquiry slip

Quick Switches are a DAVEN Specialty

And the "specialty of the house" is double-barreled . . . first, choose from hundreds of standard units to satisfy your needs—for quick switch delivery . . . second, Daven can effect quick 'switches' or changes from standard units to special switches, by using components at hand. That, too, makes for speed, dependability, economy. Write for more detailed data.

THE DAVEN CO. 199 Central Ave. Newark 4, N. J.

For more details circle NED-824 A4 on enclosed inquiry slip

New Literature & Catalogs

Alloy Steel Screws

Strong, Carlisle & Hammond Co., Mac-it Screw Div.—Socket head, socket and square head collar cap screws; hollow set and hollow lock screws; stripper bolts; square head set screws and specials are among types of alloy steel screws covered in 20-page illustrated product design bulletin. Illustrations show strength, economy, safety and appearance advantages.

For more details circle NED-825 A4 on enclosed inquiry slip

Stainless Steel Fastenings

Star Stainless Screw Co.—To facilitate speedy ordering of stainless steel fastenings, 20-page catalog 53-B itemizes in-stock cap screws, nuts, washers, machine screws, sheet metal screws, wood screws, set screws, etc., as well as pipe fittings. Back cover has chart that explains AN specifications, plus a decimal equivalent chart.

For more details circle NED-826 A4 on enclosed inquiry slip

Contract Metal Forming

C. B. Kaupp & Sons—Including deep drawing, spinning, hydroforming, stamping, welding and assembly and toolmaking, available contract production facilities are described in 16-page illustrated bulletin "Precision Metal Forming." Various difficult spinning jobs in stainless, brass and aluminum are shown in detail, and production machines are listed.

For more details circle NED-827 A4 on enclosed inquiry slip

Portable Electric Tools

Porter-Cable Machine Co.—Fifty-two different portable electric tools and special attachments comprise line described and illustrated in 44-page pocket-size catalog 201. Complete specifications and prices are given for electric saws, sanders, grinders, drills, planes, routers, shapers, hedge shears, combo-tools, radial arms, blades, abrasive wheels, disks and tool accessories.

For more details circle NED-828 A4 on enclosed inquiry slip

Demineralizing Water

Cochrane Corp.—39-page bulletin 5800, in addition to explaining principles of ion exchange and discussing applications of anion and cation exchange materials, describes design and operation of various water demineralizing systems. These include multi-stage systems and mixed bed units. How to make cost estimates for such systems is also shown, together with data on water quality obtainable.

For more details circle NED-829 A4 on enclosed inquiry slip

High Pressure Pumps

American Steel Foundries, Elmes Engineering Div.—Details of Elmes line of high pressure pumps are given in illustrated bulletin 1020. Motor driven units from ½ to 500 hp and line of hand operated units are covered. Six-plunger horizontal pumps can have pressures up to 50,000 psi.

For more details circle NED-830 A4 on enclosed inquiry slip

Power Doors

Electric Power Door Co.—In 8 illustrated pages, catalog 1000 shows variety of power doors and operating and control accessories. Complete data are given on folding, sliding, swinging, overhead and craneway doors, with blueprints, erection diagrams, selection tables and construction features. Both electric eye and radio controls are available in addition to standard units.

For more details circle NED-831 A4 on enclosed inquiry slip

Small Rolling Mills

Stanat Mfg. Co.—8-page illustrated bulletin 121 covers line of 3 and 4-in. laboratory and production rolling mills. Wire, flat, torque arm and plastics mills; rotary gang slitters and roller levelers are included. Components and accessories are shown and specifications given.

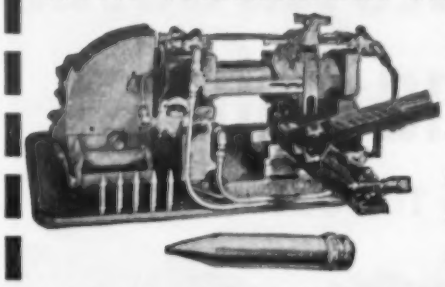
For more details circle NED-832 A4 on enclosed inquiry slip

Resin Protective Coatings

Bakelite Co.—Decreased maintenance costs and extended service life are among the advantages of protective resin coatings in applications ranging from grain elevators, oil pipes, railroad hopper cars and mining timbers to dairy processing equipment described in 8-page illustrated folder No. VG. Folder is of the case-history type.

For more details circle NED-833 A4 on enclosed inquiry slip

ROLL YOUR MARK WITH *ACROMARK SERIES 9A MARKING MACHINES



• FAST
• BETTER MARKS
• MARKS STEEL
• MARKS PLASTIC

MADE IN VARIOUS MODELS FOR HOT OR COLD MARKING—THE MODERN WAY

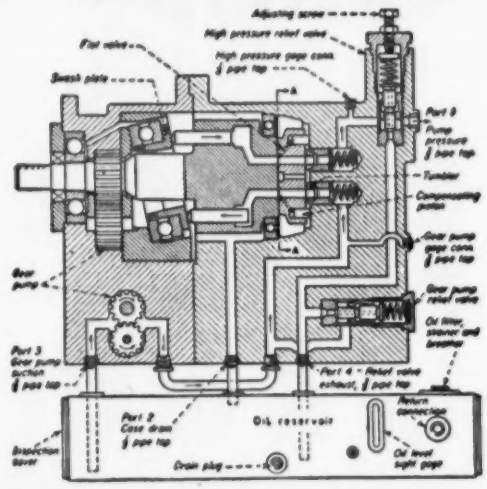
COLD marking of steel, stainless steel, other metals and materials is simple with this sturdy, powerful machine. Roller dies mark flat parts and flat dies mark round parts by rolling the part.
Dies last longer. Marks are better. QUIET production is higher. Machines have motor, air or combination drives.
ASK FOR SERIES 9AM MACHINES
*Reg. U.S. Pat. Off.

HOT marking of painted, baked enameled, and chemically finished metal parts, IN COLOR is easy to accomplish FAST in this machine. PLASTIC products that stamping would crush or otherwise damage are readily marked at high speed in it too.
Ask for Acromark series 9AH marking machines

* ACROMARK
THE ACROMARK COMPANY
7-11 MORRELL ST., ELIZABETH, NEW JERSEY

For more details circle NED-834 A4 on enclosed inquiry slip

HEAVY DUTY HYDRAULIC POWER PUMPS
Pressures to 3000 & 5000 psi



The Oilgear Company announces three new "Fluid Power" heavy-duty constant delivery axial piston pumps. Similar components have been tested and proven in more than 100,000 installations without a single failure on record. Features of these fluid power generators are: patented balanced small flat valves with controlled oil film between working surfaces; patented small one piece rolling pistons; patented quiet reverse flow relief valves; 100% supercharge that minimizes oil compression, prevents air entry and assures quieter operation. These units in pressures up to 3000 and 5000 psi are especially suited to heavy duty pushing, pulling, lifting, lowering and maintaining high static loads on large clamping rams; for use in the iron, steel, metal working, plastic, automotive, rubber, printing, lumber and textile industries. For illustrated descriptive and application data, write for Bulletin 46601. THE OILGEAR COMPANY, Dept. A, 1582 West Pierce Street, Milwaukee 4, Wisconsin.

For more details circle NED-835 A4 on enclosed inquiry slip

how to SOLVE your LOW-CAPACITY FLOW CONTROL problems

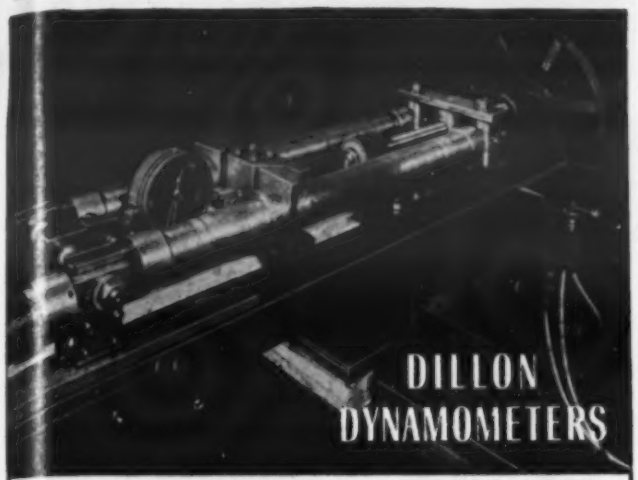
BULLETIN 1053

Here's a new and improved bulletin on Air-Powered Controlled Volume Pumps ...your guide to precise flow rate control of low-capacity chemical and slurry streams.
It's fact-filled . . . gives you operating principles, tables, applications, features and designs, examples of complete Milton Roy engineered chemical feed systems.
Solve your low-capacity flow control problems. Send for your free copy of Bulletin 1053, now.

MILTON Roy COMPANY
1304 E. MERMAID LANE
PHILA. 18, PA.

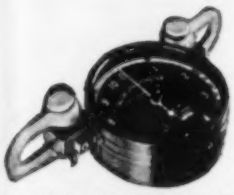
CONTROLLED VOLUME PUMPS ARE FLOW CONTROL INSTRUMENTS

For more details circle NED-836 A4 on enclosed inquiry slip



LOAD MEASUREMENT IN "TIGHT" SPOTS

Above view shows DILLON DYNAMOMETER hooked into mechanical assembly to indicate exact amount of friction encountered by packing in hydraulic cylinders. Just one of scores of uses for this handy instrument.



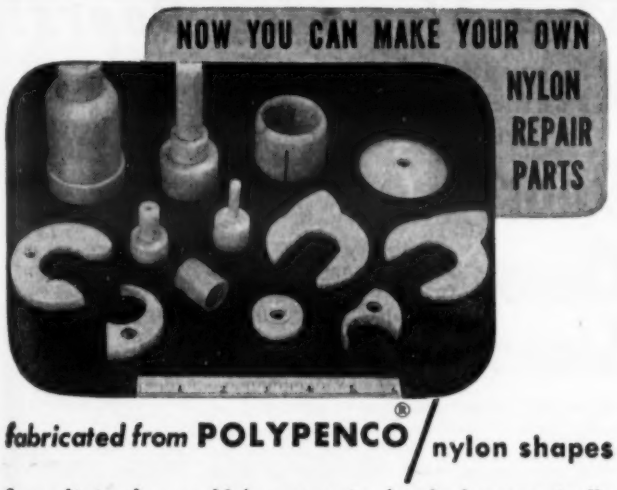
COMPACT—ACCURATE

13 different capacities from as low as 0-500 lbs. up to 0-100,000 lbs. Thousands in use. Instantly reads load applied by hoists, turnbuckles, air pistons, etc. Has max. pointer and attachment shackles. LOW in cost!

WRITE FOR CATALOG AND FREE TENSILE STRENGTH COMPUTER

W. C. DILLON & CO., INC. 14620NE Keswick St., Van Nuys, Calif. (Suburb of Los Angeles)

For more details circle NED-837 A4 on enclosed inquiry slip



fabricated from POLYPENCO® / nylon shapes

Immediate delivery of POLYPENCO nylon rod, tubing, strip and slab. We'll help you fabricate.

- Make one part or hundreds economically on standard metalworking tools
- Reduce wear on gears, bearings, gaskets, cam followers, etc.
- Eliminate lubrication
- Eliminate corrosion on exposed surfaces
- Eliminate backlash and noise
- Get top performance in every part with quality-controlled Polypenco nylon shapes

POLYPENCO NYLON

WRITE FOR GENERAL BULLETIN

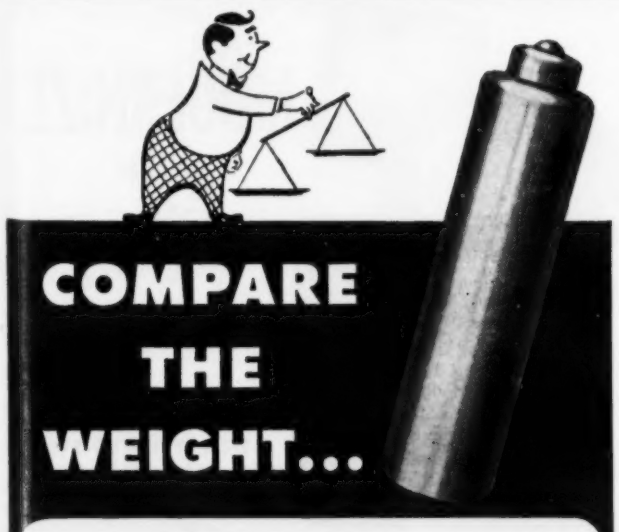
nylon and Teflon*—other non-metallic/stock shapes

finished parts also available to your specifications

The POLYMER CORPORATION of Penna. • Reading, Penna.

*trademark for Du Pont tetrafluoroethylene resin

For more details circle NED-838 A4 on enclosed inquiry slip



...of a Hackney Deep Drawn Part such as this with a cast, forged or welded pipe part. Here's a way to cut product weight—without impairing strength, durability or resistance to vibration.

It's a way successfully used—by dozens of other manufacturers—to cut weight, achieve closer tolerances, reduce production costs or improve product appearance. Write for details.

Hackney MILWAUKEE

Pressed Steel Tank Company

Manufacturer of Hackney Products

1450 S. 66th St., Milwaukee 14

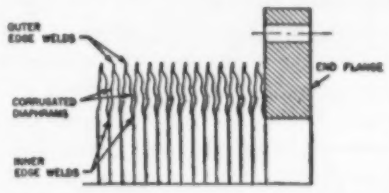
CONTAINERS FOR GASES, LIQUIDS AND SOLIDS

For more details circle NED-839 A4 on enclosed inquiry slip

New Processes & Materials

METALLIC BELLOWS
feature wide flexibility range and are heat and vibration resistant

Construction of welded diaphragm type of metallic bellows gives them long life under severe conditions of corrosion, vibration and high temperature. Welded design distributes flexing over the entire height of the convolution, thus avoiding a concentration of flexing that leads to failure. Flexibility can be increased by increasing the height of the convolutions.



Standard type of bellows consists of a series of male expansion elements, and nesting type is comprised of a series of nesting male and female expansion elements for extreme flexibility applications. Standard type is made in 50 sizes from 1-in. ID up to 36 in. ID, depending upon application. Nesting type, made in 27 sizes, ranges from 0.687 to 7.375 in. ID. Both are offered in stainless steel, Monel and Inconel. Made by **Titeflex, Inc.**, 548 Frelinghuysen Ave., Newark 5, N. J.

For more details circle NED-840 A4 on enclosed inquiry slip

SHEET WAX
features adhesive backing

Pressure-sensitive adhesive backing on Master Sheet Wax considerably lessens labor and muss on jobs where sheet wax is currently used, such as mock-up work in the aircraft industry and build-up work in the pattern industry where wax is attached to the job. The adhesive-coated wax sticks to any clean, oil-free surface and sheets can be used over and over again if not damaged. Sheet wax is available in all thicknesses from 0.007-in. in 8 x 12 and 12 x 24-in. standard sheets. Softening point of wax is 166 to 168° F, with special formulations available to 270° F. Made by **Kindt-Collins Co.**, 12653 Elmwood Ave., Cleveland 11, O.

For more details circle NED-841 A4 on enclosed inquiry slip

DO YOU KNOW? They've developed a new decal for use in identifying fluid lines in jet and other aircraft that resists heat up to 900° F, aromatic fuels and even Skydrol hydraulic fluids. Designated HR, this transfer can be applied with water alone. Made by Meyercord Co., Dept. NE-8, 5323 W. Lake St., Chicago 44, Ill.

For more details circle NED-842 A4 on enclosed inquiry slip

MANZEL

FLOOR CRANES

Make light, safe work of lifting engines and machinery, loading and unloading trucks, raising vehicles, and many other heavy jobs.

Manzel Floor Cranes are available in one to two ton capacities. Four point suspension prevents tipping. Sturdy combination handle provides accurate steering and smooth, fast pumping. This fast, versatile, and relatively inexpensive equipment for heavy lifting and moving will quickly pay for itself. Write today for complete information.

Manzel

DIVISION OF FRONTIER INDUSTRIES, INC.

302 BABCOCK STREET, BUFFALO 10, N. Y.

For more details circle NED-843 A4 on enclosed inquiry slip

Want Temperature Controls That Save Money, Increase Performance:

USE

KLIXON Thermo-Snap CONTROLS

Actuated by the scientifically calibrated thermostatic disc, Klixon disc-operated controls "snap" the circuit open with a quick, clean break — and "snap" it closed again to a solid make no matter how often they operate. Because Spencer Controls have no complicated relays, toggles, magnets or other fussy parts, their accurate performance is unaffected by shock, vibration, motion or altitude regardless of the position of mounting.

What's your temperature control problem ...low and high limit controls, fuel delay switches, tube and rectifier cooling, fan switches, temperature control . . . Klixon Thermo-Snap Controls are meeting the requirements for these and other applications daily.

Klixon Thermo-Snap Controls are available in many hermetically sealed and open types in a wide variety of operating temperature ranges.

Write for their help or further information.

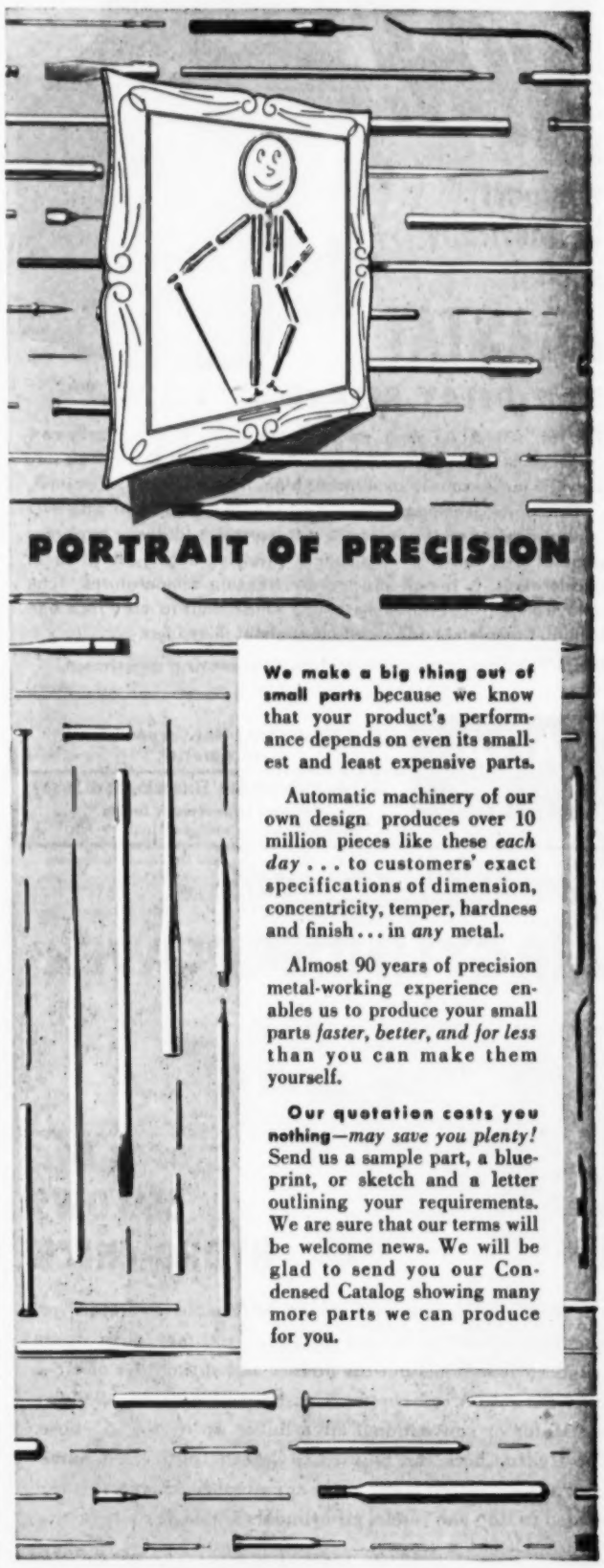
KLIXON

SPENCER THERMOSTAT

Division of Metals & Controls Corp.

1901 FOREST STREET, ATTLEBORO, MASS.

For more details circle NED-844 A4 on enclosed inquiry slip



We make a big thing out of small parts because we know that your product's performance depends on even its smallest and least expensive parts.

Automatic machinery of our own design produces over 10 million pieces like these *each day* . . . to customers' exact specifications of dimension, concentricity, temper, hardness and finish . . . in *any* metal.

Almost 90 years of precision metal-working experience enables us to produce your small parts *faster, better, and for less* than you can make them yourself.

Our quotation costs you nothing—*may save you plenty!* Send us a sample part, a blueprint, or sketch and a letter outlining your requirements. We are sure that our terms will be welcome news. We will be glad to send you our Condensed Catalog showing many more parts we can produce for you.

THE TORRINGTON COMPANY

Specialties Division

808 Field Street, Torrington, Conn.

TORRINGTON SPECIAL METAL PARTS

Makers of Torrington Needle Bearings

For more details circle NED-845 A4 on enclosed inquiry slip

TAPER PIPE THREADS tapped on a drill press with "Auto-tap" TRADE MARK LEAD SCREW TAPPING ATTACHMENT

Quicker. Better. Less scrap. No skilled help needed.

Send for Bulletin

Automatic Methods INC. 953B West Grand St., Elizabeth, N. J.
PRECISION PARTS FOR AIRCRAFT

▲ For more details circle NED-847 A4 on enclosed inquiry slip ▲

NEW!

Compact, hermetically sealed

AGASTAT trademark TIME DELAY RELAYS

2⅛" square, 4" high. Weighs 1.2 lbs.

The SF AGASTAT is a solenoid operated, pneumatically-controlled time delay relay. It is hermetically sealed in an enclosure only 2⅛ inches square by 4 inches high. It weighs only 1.2 pounds.

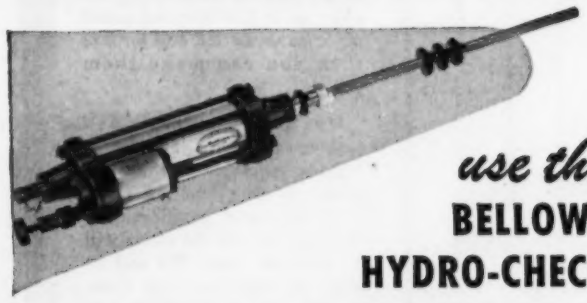
Originally developed for aircraft use, the SF is ideal wherever control devices must operate in wet, corrosive, dusty or explosive atmospheres, and for applications involving shock, vibration or acceleration. It is not affected by freezing temperatures. Time delay range from approximately 30 milliseconds to more than one minute. Completely adjustable throughout this range.

Write for details and application engineering assistance.
Address Dept. A-13-15

AGA DIVISION — Elastic Stop Nut Corporation of America
1027 Newark Avenue, Elizabeth, New Jersey
Pioneers in pneumatic timing.

▲ For more details circle NED-848 A4 on enclosed inquiry slip ▲

for velvet-smooth AIR CYLINDER POWER



use the BELLOWS HYDRO-CHECK

The Bellows Hydro-Check is an adjustable hydraulic resistance unit used to control the piston rod movement of air cylinders. It smooths out the bounce and springiness of air—takes out piston rod chatter. Can be used with any Bellows Air Motor or conventional air cylinder up to 4½"-5" bore. The Hydro-Check can be used to "check" piston rod movement at any desired point, or at any number of points; it can be used to stop and restart air cylinders at one or more points.

Write today for free copy of Bulletin HC-600R. Address Dept. NED 154.

818A

The Bellows Co. AKRON 9, OHIO

▲ For more details circle NED-849 A4 on enclosed inquiry slip ▲

New Literature & Catalogs

Hand Trucks

Nutting Truck & Caster Co.—8-page illustrated bulletin 54-DJ covers 25 models of hand trucks, pallet jacks, barrel, utility, tray and other similar type materials handling equipment. Features, specifications and illustration are given for each unit.

▲ For more details circle **NED-850 A4** on enclosed inquiry slip ▲

Solenoid Valve

Valcor Engineering Corp.—Low pressure drop and a floating shear seal are design features of the Valcor solenoid valve, described and illustrated in 12-page brochure. As valve is cycled, lapping action between disk and seat improves the seal. Construction details and applications are shown.

▲ For more details circle **NED-851 A4** on enclosed inquiry slip ▲

Electric Heaters & Controls

Industrial Engineering & Equipment Co.—Revised file-type catalog contains a wealth of illustrated data on various electric heaters and controls. These include strip, flat, immersion, air and oven heaters; preheaters; hotplates; thermostats and controls; and blast coils and boosters. Containing better than 90 pages, catalog has cut-out index for easy reference to any of the many items and reference and engineering data it contains.

▲ For more details circle **NED-852 A4** on enclosed inquiry slip ▲

Refractory Depositing Equipment

Blastcrete Service Co.—4-page illustrated bulletin "Blastcrete Guns & Angle Nozzles" shows equipment for shooting refractory lining into cupolas, reverberatories, converters, electrics, boilers, ladles, spouts, breasts and other equipment exposed to heat. Guns place between ¾ and 6 cu yd of materials per hour and handle fines to ⅜-in. sand and refractories.

▲ For more details circle **NED-853 A4** on enclosed inquiry slip ▲

Drilling & Tapping Machines

Edlund Machinery Co.—8-page bulletin 130 illustrates and describes 2B, 3B and 4B vertical motor cone pulley drilling and tapping machines. They are available in 8, 12, 15 and 16-in. overhang models with 1 to 8 spindles. Capacities range up to 1¼ in. in mild steel. Bulletin also shows attachments, including semiautomatic power feed, reversing motor tapper, lead screw tapper and ball bearing back gears.

▲ For more details circle **NED-854 A4** on enclosed inquiry slip ▲

Clad Metals

Superior Steel Corp.—"An Introduction to Clad Metals" is title of 24-page manual offering a comprehensive survey of manufacture and applications of stainless, copper, brass and other clad steels. Subjects include principles of bonding, characteristics of clad metals, and methods of cladding.

▲ For more details circle **NED-855 A4** on enclosed inquiry slip ▲

Silicon Carbide

Carborundum Co.—Physical and chemical properties of silicon carbide in its various forms are related to such applications as refractories and refractory cements, electric heating elements, resistors, metallurgic deoxidizers, catalyst carriers and use as porous media in 52-page data bulletin "Facts About Silicon Carbide." These applications are in addition to standard use for grinding and polishing abrasives, which is also comprehensively covered.

▲ For more details circle **NED-856 A4** on enclosed inquiry slip ▲

Toolroom & Production Millers

Nichols-Morris Corp.—Details and specifications of Nichols millers are found in 6-page illustrated bulletin 101 "The Miller that Uses its Head." Included are machines for toolroom and laboratory; second operation milling boring and facing; high speed semiautomatic production; two-spindle models; and standard hand miller.

▲ For more details circle **NED-857 A4** on enclosed inquiry slip ▲

Synthetic Organic Chemicals

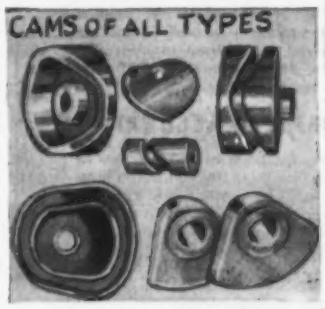
Carbide & Carbon Chemicals Co.—20-page annual issue of "Physical Properties of Synthetic Organic Chemicals" is a guide for users of organic chemicals. Data on more than 330 products and 36 new chemicals are included. They are arranged by family groups for easy reference. Applications also are presented in this 1954 issue.

▲ For more details circle **NED-858 A4** on enclosed inquiry slip ▲

TURNTABLES AND POSITIONERS over 100 different types for welding, brazing, soldering, spraying, glass insulator melting and glass glazing, with rotating stations and indexing with barrel cam or geneva gear action. For work transferring, tilting positions, motorized or hand operated. Rotating tables of all kinds for over 32 years. Many types made by EISLER. We supply any part or complete equipment and we make special turntables to your order. Write for catalog.

Eisler Indexing Turntables are Completely Electrically Controlled.

CAMS MADE TO YOUR SPECS.



DR. CHARLES EISLER, M. E., PRES.
EISLER ENGINEERING CO. INC., 740 S. 13TH ST., NEWARK 3, N. J.

▲ For more details circle NED-859 A4 on enclosed inquiry slip ▲

Stop Slamming Doors!

KANT-SLAM HYDRAULIC Door Check

Closes Stops Large or Small Doors, Screen Doors and Gates Easily, Gently, Smoothly Slamming . . . Banging . . . Broken Door Glass . . . Insects . . . Drafts . . . Heat Loss

$9.95 DELIVERED

THOUSANDS IN DAILY USE IN EVERY STATE IN U. S. SCHOOLS, HOSPITALS, FACTORIES, WAREHOUSES, OFFICES, INSTITUTIONS PUBLIC BUILDINGS ATTRACTIVE, DARK BRONZE, METALLIC LACQUER FINISH—HAMMERED BRONZE EFFECT

KANT-SLAM closes doors with efficiency of human hand. Hydraulic action—NOT an air check—piston works in oil. 3 years trouble-free service guaranteed. Price about half of other hydraulic controls.

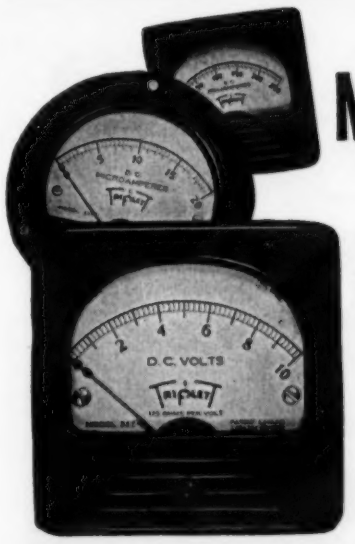
Works any place along hinge side of door—top, middle or bottom—either right or left hand doors. KANT-SLAM is completely self-contained—door and hinges are absolutely free of any strain or pressure. Holds door open when past 90 degrees.

Only one size Check required—three sizes easily detachable springs available for various size doors. Simple screw adjustment for closing speed.

Order on 30 Days FREE TRIAL—or Write for Complete Details

KANT-SLAM Door Check Co.
16 W. Spring St., Bloomfield, Ind.

▲ For more details circle NED-860 A4 on enclosed inquiry slip ▲



MODERNIZE WITH TRIPLETT METERS

A SIZE, TYPE, AND STYLE FOR EVERY INSTALLATION

Your instrumentation is strictly modern in design and construction with Triplett Meters. You can have sizes 2" to 7" in a wide variety of case shapes and mounting arrangements, A.C., D.C., R.F., Rectifier or Dynamometer. Molded and metal cases, rear illumination, and other special features are available. For precision and economy virtually every meter part is made in Triplett plants under rigid humidity and dust control. Every meter represents the refinements gained in half a century of meter experience. Keep *your* panels up-to-the-minute with Triplett Meters—famous the world over for quality, accuracy, and dependability.

Triplett Electrical Instrument Co. Bluffton, Ohio, U.S.A.

TRIPLETT

▲ For more details circle NED-861 A4 on enclosed inquiry slip ▲

BERGER SPECIALIZES

in finest finishes on sheet steel products

Berger offers a unique combination of specialized contract manufacturing facilities geared to big volume runs of sheet steel products. Finishing facilities are outstanding, and capable of delivering the same quality you see in Berger's own products—office furniture, steel kitchens, lockers, shelving. In addition, Berger offers you the use of large stocks of tools and dies; design and engineering assistance; advantageous shipping out of centrally-located Canton, Ohio. Berger service is complete, including machine work, welding, assembly, finishing, and packing. Fully described in Bulletins 793 and 908. Write:

BERGER MANUFACTURING DIVISION
REPUBLIC STEEL
1084 Belden Ave., Canton 5, Ohio • Export Dept.: Chrysler Bldg., New York 17, N. Y.

For more details circle NED-862 A4 on enclosed inquiry slip

For more details circle NED-863 A4 on enclosed inquiry slip

AERO-SEAL WORM-DRIVE HOSE CLAMPS

WON'T SHAKE LOOSE!

Wherever you have to clamp a hose connection tight . . . or wherever you want to lock two objects of any shape together in an unshakeable bond . . . your best bet is AERO-SEAL.

Threads of steel worm engage deep into slots in stainless steel band—hold tight under extreme vibration in automotive, aircraft and industrial applications. CAN'T SHAKE LOOSE.

One-Hand Installation

Install an Aero-Seal any place you can reach with thumb and one finger. Self-feeding when band engages worm threads. Thumb-grip and screwdriver types.

Re-use Again and Again

When hose is worn you RE-USE the same Aero-Seal again and again. RE-USE Aero-Seals on temporary clamping jobs—they conform to any shape without damaging band.

Use of stainless steel subject to government regulations

"Aero-Seal" WORM DRIVE HOSE CLAMPS

ANOTHER BREEZE MARK PRODUCT

BREEZE CORPORATIONS, INC.
41 South Sixth St. Newark, N. J.

For more details circle NED-864 A4 on enclosed inquiry slip

New Processes & Materials

EVAPORATION PREVENTIVE
floating blanket of plastic balloons

Amount of evaporation losses from oil storage tanks can be reduced by 80 to 90 per cent by use of Microballoons, microscopic spheres of Bakelite phenolic resin floating in a thin layer on the surface of the oil. Developed by Standard Oil Co. of Ohio, material is used in a 1-in. tightly packed layer which rises and falls as the level goes up and down in the tank. It resembles particles of finely ground dark flour and has a bulk density of about 8.7 lb per cubic foot. Microballoons are pumped into the tanks mixed with crude oil. Available from **Bakelite Co.**, Dept. NE, 300 Madison Ave., New York 17, N. Y.

For more details circle NED-865 A4 on enclosed inquiry slip

CABLE SPLICE TAPE
for electrical and general use

Available in standard ¾ and 2-in. wide 15-ft long rolls, CSI cable splice rubber tape is designed for electrical and general purpose use. Specifications include dielectric strength of 19,000 v, elongation factor of 600 per cent and tensile strength of over 19 lb per inch of width. Strong adhesive properties make it possible for the tape to be applied lengthwise by pinching edges, effecting savings in both time and material. Material is waterproof and acid resistant. Distributed by **CSI Sales Co.**, P. O. Box 143, Solon, O.

For more details circle NED-866 A4 on enclosed inquiry slip

COATING RELEASE AGENT
eases removal of adhesives, lacquers

Clean-up time for adhesive and coating application equipment can be reduced 50 per cent with Release-Cote release agent. Product prevents adhesives, lacquers, resins, paints or other coating materials from adhering to walls of pots, tanks, rollers, shafts and feed tables. It prevents build up of adhesives on journals and side scrapers, and when adhesive dries, it can be easily peeled off. Agent is applied to all exposed surfaces, except applicator rollers, with brush, rag, sponge or spray equipment. At clean up time coated areas can be quickly cleaned with warm water, or simple water rinse. Product will also prevent adhesive from sticking to skin and contains no harmful irritants, fumes or offensive odors. It is supplied in quarts, gallons and 5-gal drums. Formulated by **Potdevin Machine Co.**, 273 North St., Teterboro, N. J.

For more details circle NED-867 A4 on enclosed inquiry slip

PLASTIC PIPE & FITTINGS
feature is high impact strength

Adaptable to wide range of applications where corrosion from acids and alkalies is a problem, lightweight rigid plastic pipe and slip-sleeve fittings are produced from B. G. Goodrich polyvinyl chloride resin. Pipe is five times lighter than steel of similar size and is reported to have high impact strength. Slip-sleeve fittings are cemented to pipe readily by solvent type cement which is applied by brush. Smooth interior surface offers minimum resistance to flow. Wide range of sizes is available. Made by **Alpha Plastics Inc.**, 14-16 Northfield Rd., West Orange, N. J.

For more details circle NED-868 A4 on enclosed inquiry slip

NEW WAY TO LOWER SLING COSTS

Let us send you this new bulletin on ROEBLING ALL-PURPOSE SLINGS with the Tapered Sleeve Splice

YOU SAVE every way with these slings: 1) they cost less, are ready for the job; 2) they're flexible, easy to handle, tough, long lasting, develop the full catalog strength of the rope. And now you can get All-Purpose Slings with a heavy steel galvanized thimble, plus attached weldless hooks, links or shackles, if desired. They're available with loops in standard lengths and sizes; stocked by Roebling distributors and branches...Order All-Purpose Slings with the Tapered Sleeve Splice for lower sling costs; and send for new descriptive bulletin. John A. Roebling's Sons Corporation, Trenton 2, N. J.

Subsidiary of The Colorado Fuel and Iron Corporation

ROEBLING

For more details circle NED-869 A4 on enclosed inquiry slip

Why buy expensive tooling?

Dumore Drill Heads mass produce small holes — *at a fraction of the cost!*

LOW-COST Dumore Automatic Heads mount in any position . . . easily set up to handle practically every small hole drilling operation. They make it simple to drill multiple holes in a single workpiece in only one operation . . . are equally efficient as components of multiple station machines.

These compact, 17½-lb. precision tools are self-contained . . . require no expensive air or hydraulic lines . . . have built-in automatic controls.

Get the details today. Write —

DUMORE PRECISION TOOLS
THE DUMORE COMPANY
1333 Seventeenth St. • Racine, Wis.

For more details circle NED-870 A4 on enclosed inquiry slip

Wolverine

Heavy Duty **QUICK ACTION TOGGLE CLAMPS**

***Extra* CLEARANCE**
***Extra* SPEED**

Rugged construction—drop forgings, cast steel and solid bar stock.

• • •

Wolverine Toggle Clamps also available in several types and sizes of Standard Action and Push Action units.

• • •

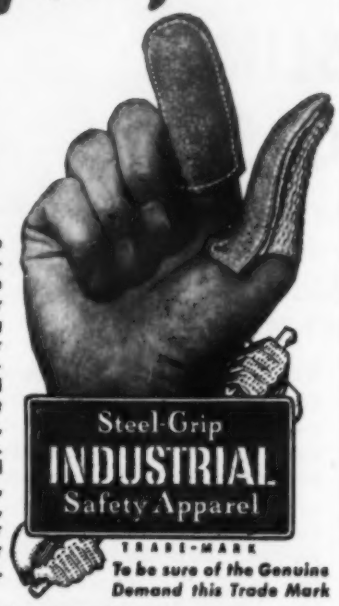
Wolverine Clamps are in use in almost every major industrial field and are specified by prominent engineering firms. Write for Bulletin.

WOLVERINE TOOL CO.
1482 E. WOODBRIDGE
DETROIT 7, MICHIGAN

For more details circle NED-871 A4 on enclosed inquiry slip

Save Fingers

With Steel-Grip Open End Finger Guards



Hundreds of factories save time and injuries and speed production by protecting workers with Steel-Grip Open End Finger Guards. Used for handling rough or sharp articles, for buffing, grinding, sanding, polishing, punch press work and hundreds of other jobs. Protect fingers or thumb, front or back, from cuts, abrasions or blisters. Various designs made in several leathers, and other materials, with elastic web back for snug, cool, comfortable fit. Sizes for men and women. Send 10c for sample. (U.S. PATENTS NO. 2,351,906—NO. 2,461,872)

Catalog of Industrial Safety Apparel free on request

INDUSTRIAL GLOVES COMPANY
A CORPORATION
1520 Garfield St., Danville, Illinois
IN CANADA: SAFETY SUPPLY CO., TORONTO
Famous Industrial Safeguards Since 1910

▲ For more details circle NED-872 A4 on enclosed inquiry slip ▲

SEAL WIRING SYSTEMS AGAINST OIL, WATER, DIRT, GREASE, ACIDS and CHEMICALS

• Here are flexible conduit connectors with a big plus! Appleton "ST" Series Connectors not only stay tight, but assure positive exclusion of liquids, fumes, chips, shavings and other foreign matter from machinery electrical systems. As a result, costly shutdowns and loss of man hours are eliminated!

Appleton "ST" Series Connectors come in straight, 45° and 90° to fit flexible conduit sizes from ⅜" to 1¼". Also, 1½" and 2" straight. They provide a positive ground between conduit and connectors and maintain voltage within 10 millivolts drop.

For complete information, contact your wholesaler or write, today!

APPLETON ELECTRIC COMPANY
1758 Wellington Avenue • Chicago 13, Illinois
Also Manufacturers of

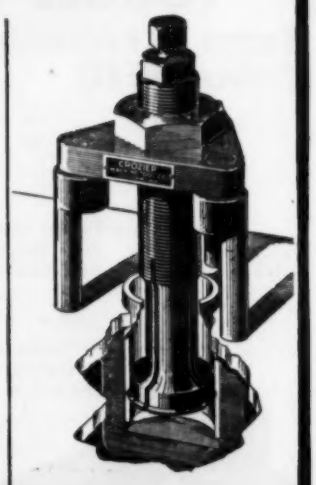
▲ For more details circle NED-873 A4 on enclosed inquiry slip ▲

NEW EXTRACTOR

removes bushings from blind holes ...cuts time 75 per cent

The entirely new method of extracting bushings, bearings, sleeves, liners, etc. Eliminates necessity for machining, minimizes the hazard of injury to casings or excessive dismantling of equipment, handles holes from ½ to 2"—over 5 tons have been extracted with unit. Eliminates as much as 75 per cent of labor and time, slashes inventory.

For complete information write Department NED-1



CROZIER *Machine Tool Co.*
684 NO. PRAIRIE AVENUE, HAWTHORNE, CALIFORNIA

▲ For more details circle NED-874 A4 on enclosed inquiry slip ▲

New Literature & Catalogs

Industrial Cranes

Harnischfeger Corp., Overhead Crane Div.—24-page illustrated bulletin C6-3 gives specifications and description of line of industrial cranes. Many installations are shown.

▲ For more details circle NED-875 A4 on enclosed inquiry slip ▲

Nonfusion Welding

Eutectic Welding Alloys Corp.—The nonfusion welding process is featured in 16-page brochure on welding materials and processes, showing how it differs from conventional procedure. Brochure is of interest to all concerned with welding and also describes company products, manufacturing equipment, procedures and research activities.

▲ For more details circle NED-876 A4 on enclosed inquiry slip ▲

Magnetic Chucks

Taft-Peirce Mfg. Co.—Complete line of electromagnetic chucks is covered in 16-page illustrated bulletin 411. Units are available in both rectangular and rotary styles. Holding surfaces in rectangular style range up to 36½ x 60 in., with a maximum length of 96⅞ in. A sine-angle chuck is featured. Controls and accessories are also shown.

▲ For more details circle NED-877 A4 on enclosed inquiry slip ▲

Industrial Rolls

Rodney Hunt Machine Co.—In 48 well-illustrated pages, catalog No. 48 covers metal, wood, rubber and plastic industrial rolls. Stainless steel and Teflon are among the materials used. Both wet and dry types are available for service in textile and paper industries particularly. Care and repair are shown, and complete specifications and ordering information are given.

▲ For more details circle NED-878 A4 on enclosed inquiry slip ▲

Shearing Manual

O'Neil-Irwin Mfg. Co.—Selection, setup and operation of hand and power operated precision shears are covered in 14-page illustrated manual and guide No. D-S1. Shearing such materials as plastics, fiber, mica, rubber, aluminum, stainless steel and spring tempered materials is discussed, and standard tabular capacities and specifications are given for the four shears shown.

▲ For more details circle NED-879 A4 on enclosed inquiry slip ▲

Corrosion Resistant Valves

Associated Valve & Engineering Co.—Needle and safety and relief corrosion-resistant valves are described and illustrated in catalog sections "A" and "E". Construction details, dimensions and capacity tables are shown for the various units, which are available in many styles for wide range of temperature and pressure service and in a wide variety of materials suited to specific applications.

▲ For more details circle NED-880 A4 on enclosed inquiry slip ▲

Tumbling Barrels

Hupp Corp., Globe Stamping Div.—For deburring, burnishing, polishing and for combination of these processes, tumbling barrels described in 12-page illustrated catalog B-9 handle stampings, castings, forgings in ferrous, nonferrous and other materials. Complete information is given on the many different models. Tumbling media are also listed, and job information given.

▲ For more details circle NED-881 A4 on enclosed inquiry slip ▲

Metal Expansion Bellows

Titeflex, Inc.—Special type of metal expansion bellows with 11/16 to 7⅜-in. ID for conveying gas and liquids is described and illustrated in 6-page bulletin 300. Text and diagrams explain welded diaphragm construction and points out how this feature enables bellows to withstand high temperature, vibration and corrosion.

▲ For more details circle NED-882 A4 on enclosed inquiry slip ▲

Adhesives, Sealers & Coatings

Minnesota Mining & Mfg. Co., Adhesives & Coatings Div.—12-page illustrated booklet is designed to aid in the correct application of aircraft industry adhesives, coatings and sealers. Coatings described include corrosion resistant, rain erosion resistant, strippable and special. Adhesives include general purpose, fuel cell repair, high temperature, honeycomb sandwich and metal-to-metal. Sealers include fuel, oil and pressure types.

▲ For more details circle NED-883 A4 on enclosed inquiry slip ▲

Here a Torit 19-FB Dust Collector and Torit Wheel Hoods effectively solve the dust problem for a large double-end polishing lathe. No lint or polishing dusts escape to endanger working conditions.

Up to 95% of the dusts spin into the pull-out drawer in the base of this Torit Dust Collector and the remainder is trapped in the after-filter bag.

Torit Dust Collectors are turning in top performances in every type of industry. They will star for you. Write for information.

TORIT MANUFACTURING COMPANY
298 WALNUT STREET ST. PAUL 1, MINN.

▲ For more details circle NED-884 A4 on enclosed inquiry slip ▲

New 1-ton Aluminum PACKET HAND CHAIN HOIST weighs only 32 pounds

High tensile wrought aluminum alloy parts make it 21 lb. lighter than 1-ton all-steel Packet

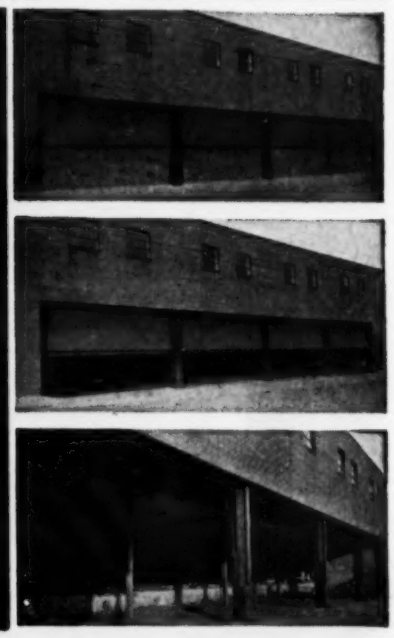
Though much lighter in weight, the aluminum Packet retains the drop-forged, heat treated steel hooks; the electrically welded, oval link, heat treated, steel load chain; and the mounting of rotating parts on prelubricated, shielded ball bearings of the all-steel hoist.

To obtain more information on these lightweight, spur-geared hoists that are easily carried from place to place, look in your local classified telephone directory under "Hoists" for your nearest Harrington distributor. Or write us for Bulletin P-5.

HARRINGTON PEERLESS HOISTS
THE HARRINGTON CO., 1650 W. Callowhill St., Phila. 30, Pa.
Makers of Hoists Since 1876

▲ For more details circle NED-885 A4 on enclosed inquiry slip ▲

FAST-MOVING STEEL DOORS for every industrial purpose



The door requirements of garages, warehouses, loading platforms, factories and other commercial structures can be served with high efficiency by Truscon Steel Industrial Doors, either mechanically or hand-operated. Available in wide variety including straight slide, accordion, vertical lift, turnover, lift-swing, canopy, crane and other types. Write for illustrated literature showing complete Truscon line.

TRUSCON® STEEL DIVISION
REPUBLIC STEEL
1096 Albert Street
Youngstown 1, Ohio

▲ For more details circle NED-886 A4 on enclosed inquiry slip ▲

- Class 3 Screws
- AN Drilled Fillister Heads
- AN WASHERS
- Studs, Standard & Special
- Special Screw Machine Products
- Titanium Bolts Now Available; Inquiries Invited

STAR
Stainless Screws have
CLEAN, BRIGHT-AND-SHINY HEADS

Star STAINLESS SCREW CO.
ARmory 4-1240
214 Union Avenue • Paterson 2, N. J.
Direct NEW YORK Telephone: Wisconsin 7-9041

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Moving or Storing is Rapid, Convenient and Inexpensive with

IRONBOUND SEMI-LIVE SKID PLATFORMS

Ruggedly built with capacities up to 2500 lbs. These units are quickly made mobile with the use of low cost lift jacks . . . One of the methods that Ironbound engineers use to increase production and conserve space at low cost.

SEMI-LIVE SKID WITH BOX TOP

. . . permanently attached or removable. Also available with many other superstructures to "Short-Haul" your products thru production or into storage. Useful in hundreds of spots in every plant.

THE IRONBOUND "SAFETY-SKID" WITH ROUND CORNERS

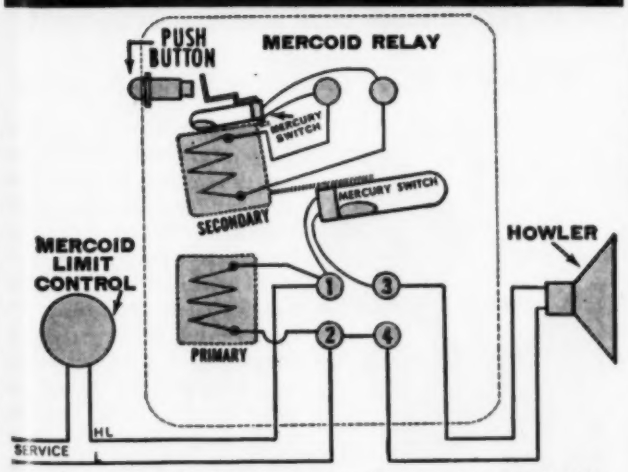
Ironbound construction assures long hard use with complete safety to product and operator. Still the time proven method for handling of materials efficiently and economically.

IRONBOUND
BOX & LUMBER COMPANY
Materials Handling Division
55 HOFFMAN PLACE • HILLSIDE, N. J.

MANUFACTURERS OF QUALITY BUILT SKIDS, SEMI-LIVE SKIDS, FLOOR TRUCKS, ROLL TRUCKS, DOLLIES AND PRY BARS

▲ For more details circle NED-888 A4 on enclosed inquiry slip ▲

MERCOID RELAY FOR AUDIBLE ALARM



When Limit Control closes its circuit, current is supplied to primary coil of Mercoid Relay and through the normally closed mercury switch to the "Howler" (alarm). To stop "Howler," operator pushes in "push button" which manually raises relay secondary and breaks circuit to "Howler." Secondary is held up by magnetic repulsion until condition is corrected. When limit control opens the primary circuit of relay, secondary coil drops to normal position and relay is automatically ready for another operation.

WRITE FOR BULLETIN CA-8R

THE MERCOID CORPORATION, 4201 BELMONT AVE., CHICAGO, ILL.

▲ For more details circle NED-889 A4 on enclosed inquiry slip ▲

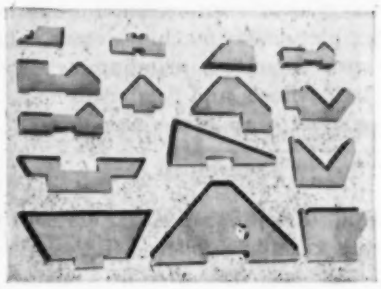
New Processes & Materials

INDELIBLE INKS made for color coding

Ability to withstand solutions and temperatures of industrial processing is incorporated in series of indelible colored inks made for color coding of fabrics, paper, metal, fiber and plastics. Colors will survive water, steam, solvents, bleaches and alkalis. Twelve standard colors are available in pint, quart and gallon containers. Special colors can be ordered. Made by **DRIflo Mfg. Co.,** 644 E. Ten Mile Rd., Hazel Park, Mich.

▲ For more details circle NED-890 A4 on enclosed inquiry slip ▲

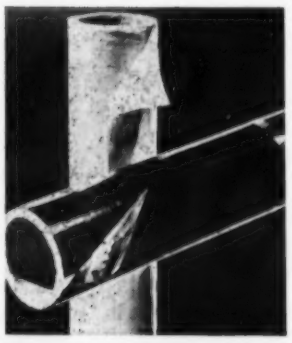
LAMINATED BEDWAYS various shapes and sizes



Wide variety of shapes and sizes is available in line of standard and made-to-specification bedways, composed of long wearing tool steel laminated to a soft steel backing under 2500 tons pressure. Heat treatment hardens ways to 65-66 Rockwell C to a uniform depth of 3/16-in. They are ground to tolerances of ±0.0002-in. Made by **Ohio Knife Co.,** Dept. 8, Dreman Ave., Cincinnati 23, O.

▲ For more details circle NED-891 A4 on enclosed inquiry slip ▲

PIPE INSULATION for hot and cold applications

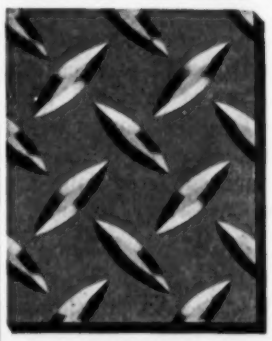


Composed of rot and corrosionproof inert glass fibers, Fiberglas low pressure pipe insulation is usable on cold water, hot water and low pressure steam lines. Black jacket of asphalt saturated kraft paper protects against condensation on cold water lines, and canvas covering is used on hot lines. There is no shrinkage, buckling or sagging under changes in temperature and humidity. Waterproof jacket is available for outdoor use. Exceptionally high insulation value is reported for this ½-in. thick material. Made by **Owens-Corning Fiberglas Corp.,** Nicholas Bldg., Toledo 1, O.

▲ For more details circle NED-892 A4 on enclosed inquiry slip ▲

THIS... PLUS THIS *non-slip flooring low budget price*

ADDS UP TO THIS A.W. SUPER-DIAMOND



Pattern ½ actual size

When you want real foot safety at an economical price, install *A. W. Super-Diamond.* No other flooring offers such safety, easy maintenance and durability at so low a cost.

Super-Diamond's exclusive engineered raised-diamond pattern puts 40 anti-skid traction points in every footstep.

Super-Diamond takes hard blows and heavy loads—resists fire, heat and most chemicals. And it cuts maintenance costs because it's so easy to clean with hose, mop or broom—has no cracks or corners to collect dirt. Send coupon today for a free copy of our newest booklet on foot safety *and* economy with *Super-Diamond.*

A.W. SUPER-DIAMOND
ROLLED STEEL FLOOR PLATE

ALAN WOOD STEEL COMPANY
CONSHOHOCKEN, PA.

Please send your new, free booklet SD-4 on Super-Diamond for safety.

Name_____
Company_____
Address_____
City_____ Zone_____ State_____

▲ For more details circle NED-893 A4 on enclosed inquiry slip ▲

The All New MOBILIFT 4000 Pounder
Has *Everything* You Want in a "Sit-Down" FORK LIFT TRUCK

MODEL D-424
4,000 lbs. capacity at 24" Load Center
83" hydraulic mast lift height 108"

Check these trend-setting features . . .

- CHRYSLER 65-bhp 6 cyl. GAS ENGINE.
- CHRYSLER GYROL FLUID COUPLING.
- MOBILIFT CONSTANT-MESH TRANSMISSION with a Push-Pull Lev-R-Matic Control for forward and reverse—No Clutch Pedal—No Gears to Shift—2 speeds forward, 2 reverse.
- MOBILIFT FULL-FLOATING DRIVE AXLE.
- BALL-BEARING WORM & NUT TYPE STEERING.
- HYDRAULIC BRAKES.
- EASY TO GET ON AND OFF—NO OBSTRUCTIONS.
- FREE ACCESS FROM LEFT OR RIGHT SIDE.
- ONE-PIECE HOOD RAISES FOR EASY SERVICE ACCESSIBILITY.

Write for complete details

LAMSON MOBILIFT CORP.
835 S. E. MAIN STREET, PORTLAND 14, OREGON
2317 W. 18TH, CHICAGO • 730 PATTERSON, E. RUTHERFORD, N. J.
2724 TAYLOR STREET, DALLAS • 2730 SAN PABLO AVE., BERKELEY
1113 SPRING STREET, N.W., ATLANTA

▲ For more details circle NED-894 A4 on enclosed inquiry slip ▲

"Our Entire Production Staff Endorses The HOBBS Tri-Power Die Press"

High output, safety features cited by Royal Lace Paper Works, Inc.

"Our new Roylprint Paper Place Mats have enjoyed very remarkable consumer acceptance . . . and certainly one main reason we have been able to maintain high quality has been use of the Hobbs Tri-Power Die Cutting Press.

"The versatile electric clutch, the safety features and the very satisfactory output are all reasons why our entire production staff endorse this equipment."

So says William T. Kelly, production manager, Royal Lace Paper Works, Inc., Brooklyn, N. Y. He is shown above at right checking die cut quality with Jud J. Mealy, production engineer at Royal Lace.

You, too, can benefit from new quality, new speed, new safety with the Hobbs Tri-Power. It has an easy hand-operated table motion, cuts cleanly at 16 strokes per minute through as much as a ream of many papers using conventional high die. Ideal for continuous run, single strokes and jogging operations.

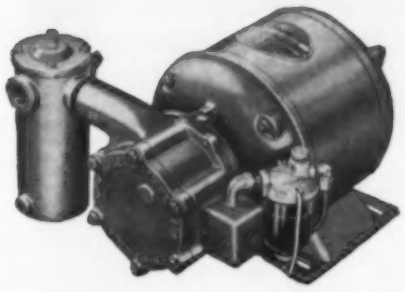
Write for free illustrated folder today. No obligation. For complete technical details describing what the Hobbs Tri-Power can do for *you,* just mention your type of production.

HOBBS MANUFACTURING CO.
41 SALISBURY STREET
EST. 1888
WORCESTER 5, MASS.

Manufacturers of Modern Converting Machinery

▲ For more details circle NED-895 A4 on enclosed inquiry slip ▲

USE THIS COMPACT MOTOAIR PUMP FOR
VACUUM
AVAILABLE IN SEVERAL SIZES



NO BELTS • NO COUPLING • DIRECT DRIVE makes it MORE COMPACT!

No other pump packs such dependable vacuum in so compact a space. It's complete with motor. Plug in and use. Visible, circulating lubrication.

Write for Catalog—

823
NEW JERSEY MACHINE Corporation
FACTORY SALES AND SERVICE BRANCHES
CHICAGO CINCINNATI LOS ANGELES
1550 WILLOW AVENUE, HOBOKEN, N. J.

For more details circle NED-897 A4 on enclosed inquiry slip

USERS OF
CLUTCHES
OVER-RUNNING • BACKSTOP • INDEXING

GET THIS FOLDER FOR YOUR FILES!

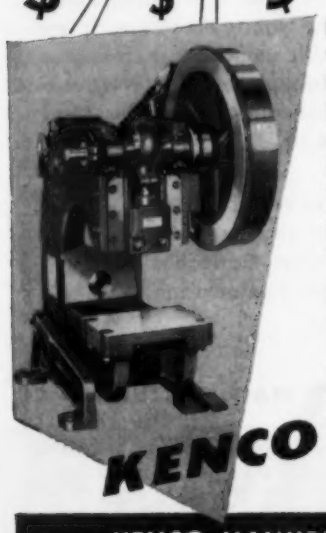
Explains why FORMSPRAG Clutches give greatest possible torque capacity for size and weight. Shows how the sprags grip at infinite number of positions—no backlash. Also contains basic engineering data.

FORMSPRAG COMPANY
23595 Hoover Road • Van Dyke, Michigan

FULL COMPLEMENT
FORMSPRAG Clutches
Distributors in principal cities

For more details circle NED-898 A4 on enclosed inquiry slip

$ $ $ $ $ $ $
THE PRESS THAT PUNCHES OUT PROFITS
$ $ $



KENCO 4 and 5 TON PUNCH PRESSES are built with precision and ruggedness found only in large presses. *They actually outperform and out-produce presses costing four times as much.* Kenco is "the only small press without the headaches."

And the Kenco 4-in-1 easily converts into a standard die space press, long die space, half and horn press... Four presses in one.

Let us prove you'll punch out big profits with Kencos... There are over 250 Kenco dealers to serve you. Write for details and name of nearest supplier.

Folder on Request

KENCO

KENCO MANUFACTURING CO.
5211 Anaheim-Telegraph Rd., Los Angeles 22, Calif.

For more details circle NED-899 A4 on enclosed inquiry slip

New Literature & Catalogs

Use of Wire in Product Design

E. H. Titchener & Co.—Photographic evidence of lightness, strength and functional beauty of wire assemblies is presented in 4-page folder "A Few Cases of the Use of Wire in Product Design." Advantages of wire forms are given and examples of services rendered are included.

For more details circle NED-900 A4 on enclosed inquiry slip

Three-Dimensional Drafting

John R. Cassell Co.—First 10 pages of catalog "Three Dimensional Drafting" are devoted to a treatise on subject often referred to as axonometric drawing. Remainder is devoted to illustrations of Instrumaster implements used in "3D" drawing.

For more details circle NED-901 A4 on enclosed inquiry slip

Flexible Shaft Machines & Accessories

Wyzenbeek & Staff, Inc.—8-page illustrated condensed catalog No. 54 contains information on line of flexible shafts, flexible shaft machines, saw attachments, hole cutters, mounted grinding wheels and cutters, brushes, buff wheels and related items.

For more details circle NED-902 A4 on enclosed inquiry slip

Heating Elements

Norton Co.—"Hot Rod" Crystolon heating elements for electric furnaces and kilns are covered in 24-page illustrated booklet 146. Expected service life, operating temperatures (up to 2800° F), mounting methods, electrical and other data are covered.

For more details circle NED-903 A4 on enclosed inquiry slip

Drawing & Document Reproduction

Eastman Kodak Co.—"Modern Drawing & Document Reproduction" is an informative 24-page brochure containing data on characteristics of Kodagraph reproduction materials. New sections cover projection positive paper and microprint paper. Information is basic for use in engineering and industrial fields.

For more details circle NED-904 A4 on enclosed inquiry slip

Standard Taps

Detroit Tap & Tool Co.—In addition to giving tap form, size availability and prices pertinent to standard Specific taps, 32-page bulletin ST-53 explains how taps are designed for maximum manufacturing efficiency and long tap life. Material classifications are steel and tough materials, cast iron, aluminum, zinc die cast metals, brass, and plastic and bakelite.

For more details circle NED-905 A4 on enclosed inquiry slip

Keyway Broaches & Sets

du Mont Corp.—Quick reference on complete range of Minute Man keyway broaches and sets, including the new Combination sets, push-type production broaches, arbor presses and magnetic bases, can be made in 12-page catalog. With the broaches and kits listed, keyways can be cut by hand in one minute for as little as one cent per keyway.

For more details circle NED-906 A4 on enclosed inquiry slip

Timepieces & Stopwatches

M. Ducommun Co.—Special stopwatches for industrial, and research purposes, with precision time and motion study features are included in 12-page catalog 153 which presents the full line of Minerva timepieces. Minerva patented coil-spring construction, which reportedly ends possibilities of wear, friction and failure for lifespan of the watch, is explained.

For more details circle NED-907 A4 on enclosed inquiry slip

Machine Builder's Plant

Arthur Tickle Engineering Works—An insight into the scope of company's Brooklyn plant facilities is effectively provided in 16-page booklet. Piece illustratively takes reader through the machine shop, plate and fabrication shop, forge shop, metal spraying shop, aluminum foundry, pipe shop, pattern-making and carpentry shop and metallurgical laboratory.

For more details circle NED-908 A4 on enclosed inquiry slip

Optical Projection Comparator

Optical Gaging Products, Inc.—Applications and features of the model 2002 AO optical projection comparator are related in 8-page illustrated booklet. Separate systems provide magnifications of 10, 20, 31¼, 50 and 62½ X. Screen has 16-in. diameter maximum image area.

For more details circle NED-909 A4 on enclosed inquiry slip

These Bond Casters are Your Best Buys for TROUBLE-FREE SERVICE

36-A Series—Double Ball Race Swivel Caster
1-A Series—Stationary Caster
41-A Series—Structural Steel Stationary Caster
40-AH-VG Series—V-Grooved Wheel Structural Steel Heavy Duty Swivel Caster
3-A Series—Single Ball Race Swivel Caster
Dual Wheel Swivel Caster

Ask your industrial distributor . . .
he knows that for dependability, economy and trouble-free materials handling you just can't beat Bond Casters. Your distributor has the right Bond Casters for your jobs. Get your copy of Bond Catalog K-38 from him, or write direct.

BOND FOUNDRY & MACHINE CO.
Manheim, Pennsylvania

For more details circle NED-910 A4 on enclosed inquiry slip

you save 50% in TANK HEATING and COOLING with PLATECOIL
(REPLACE PIPE COILS)

★ You SAVE 50% in tank SPACE
★ You SAVE up to 50% in initial COST
★ You have 50% LESS WEIGHT to handle
★ You SAVE 50% in maintenance LABOR as plates are changed from outside the tank without dumping solution

. . . besides all these you get faster heating or cooling. Take advantage of the engineering assistance offered by Kold-Hold to help you with your heat transfer problems.

Send for complete technical manual and descriptive Bulletin No. P57.

PLATECOIL Division
Tranter Mfg. inc.
LANSING 4, MICHIGAN

For more details circle NED-911 A4 on enclosed inquiry slip

Add an Acme Steel 25-pound coil holder
to your present wire stitching equipment

Stitch 2½ times longer without stopping

The rugged new Acme Steel 25-pound coil holder means less down time on your wire stitching operations, both because it holds 2½ times as much wire as the conventional 10-pound coil holder, and because it's easier and faster to load. Features are tangle-free wire feed and positive shoe-type brake. For details, write Acme Steel Products Division, Dept. NED14, Acme Steel Company, 2840 Archer Avenue, Chicago 8, Illinois.

STITCH IT... STRAP IT... SHIP IT... SAFELY!

ACME STEEL

For more details circle NED-912 A4 on enclosed inquiry slip

INDUSTRIAL SOLID TIRES BY MONARCH

LONGER SERVICE LIFE

Precision built from special rubber compounds, MONARCH Mono-Cushion and Universal pressed-on tires give more ton-miles of trouble-free performance per maintenance dollar.

GREATER SHOCK ABSORPTION

MONARCH tires are designed to reduce wear and tear on vehicles, loads, floors and drivers. Their ability to absorb hard shocks eliminates costly maintenance, breakage and fatigue.

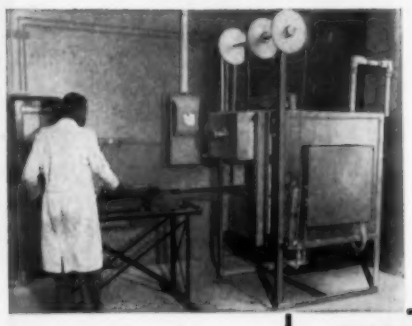
ALL TYPES AND SIZES AVAILABLE

There is a MONARCH solid tire for every materials handling truck application. For complete details see your lift truck dealer or write direct for catalog.

THE MONARCH RUBBER COMPANY
260 LINCOLN PARK
HARTVILLE, OHIO
1744-MR
7-255 Gen'l Motors Bldg. • Detroit 2, Mich.
SPECIALISTS IN INDUSTRIAL SOLID TIRES

For more details circle NED-913 A4 on enclosed inquiry slip

Even High Speed Steels—



handled with this Full-Range general-purpose heat-treating furnace Model FG-430

A Pereco Furnace cuts costs in many ways! Saves time—cuts man hours — reduces spoilage — saves on maintenance—insures better results! Why? Because clean electric heat is put under accurate, versatile control—with unmatched specialized equipment design—in a Pereco Furnace. Get the details and compare.

PERECO Electric FURNACE

PERENY EQUIPMENT COLUMBUS OHIO

Highlights

Chamber Size: 14" w. x 24" d. x 12" h.
Overall Size: 50" w. x 52" d. x 84" h.
Counterbalanced Door: Wedge-fit—air operated.
Heating Elements: Silicon Carbide—over and under.
Temperature: 2500° F. (Higher for short runs)
Controls: Furnished in separate panel-mount.
Connected Load: 45 KVA—220/60/3.

Write Today

PERENY EQUIPMENT CO.
Dept. G, 893 Chambers Rd., Columbus 12, Ohio
Standard and Special Units 450° F. to 5000° F.

For more details circle NED-914 A4 on enclosed inquiry slip

5 reasons why you should specify T&B Sta-kon® Terminals

HIGH CONDUCTIVITY... Pure electrolytic copper tongue. Long stake mark assures large contact area for low resistance and low voltage drop.

TIGHT, SURE CONNECTIONS... Serrated tongue and barrel never relax grip on cable. Once staked, T&B Sta-kon Terminals are on to stay.

EASY TO INSTALL... without flame, heat or flux. A T&B Shure-Stake hand tool is all you need to stake terminal to cable... bench tools also available.

CORROSION RESISTANT... Cable and barrel are compressed into a solid mass. There are no voids to permit interior attack from corrosive agents or atmospheres.

AVAILABLE IN A COMPLETE LINE... Including "specials". Wire sizes 22 to 4/0. Varied tongue styles and stud sizes, with and without insulation.

For information on the complete line of T & B Sta-kon terminals send for your FREE copy of T & B Bulletin #61 today.

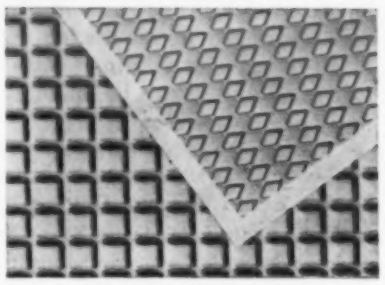
T 321

THE THOMAS & BETTS CO.
INCORPORATED
24 Butler Street, Elizabeth 1, New Jersey
THOMAS & BETTS LTD., MONTREAL, P. Q., CANADA

For more details circle NED-915 A4 on enclosed inquiry slip

New Processes & Materials

PATTERNED METALS in various forms and finishes



Two new patterns, No. 1-SQ and 2-DD, have been added to line of Rigid-Tex metal sheets. They are available in widths up to 8 and 7 in. respectively. Available finishes are mill finish as rolled, mill finish with highlights, colorized and highlighted, and painted or porcelain enameled without highlights. Materials include solid and perforated sheet, strip and coil ferrous or nonferrous metals. Uses include automobile and appliance trim, scuff plates, door hardware and similar applications requiring eye-appeal, high strength to weight ratio and mar resistance. Made by **Rigidized Metals Corp.**, 717 Ohio St., Buffalo 3, N. Y.

For more details circle NED-916 A4 on enclosed inquiry slip

PHOTOCOPYING PAPERS for dry process have good contrast

Line of dry process photocopying papers gives clear sharp copies from a wide range of original material. Papers, known as No. 1 and 2 Dri-Stat, together with processing solution designed for them, will reproduce anything that is legible on the original including penciled notations, colored ink or crayon markings and duplicated copy. The No. 1 grade is a general purpose paper affording the user a generous safety margin in selecting exposure time. No. 2 is available in three grades for general office, airmail and filing and presentation use. Made by **Peerless Photo Products, Inc.**, Dri-Stat Div., Dept. NED, Shoreham, L. I., N. Y.

For more details circle NED-917 A4 on enclosed inquiry slip

PROTECTIVE COATING for metal, wood and masonry

One coating of Formula 67 protective coating covers, seals and protects such diverse types of surfaces as metal, wood, glass, brick, unglazed tile, cement and concrete. It is rust resistant; water, acid, alkali and greaseproof; and withstands wear and weather. Application is with brush or spray without base coat or primer. Drying time is 20 minutes, and range of colors is permanent. It will not chalk. Made by **Babbitt Steam Specialty Co.**, 87 Babbitt Sq., New Bedford, Mass.

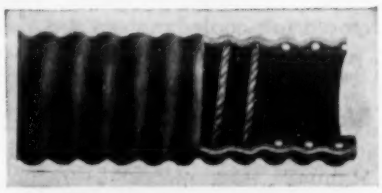
For more details circle NED-918 A4 on enclosed inquiry slip

SYNTHETIC RUBBER COMPOUND practical for sealing applications

Such properties as resistance to 300 to 325° F temperatures, good oil resistance and low compression at elevated temperatures are formulated into compound 1225, a Buna N synthetic rubber. Product is flexible at −40° F and also features tensile strength of 2500 psi, elongation of 350 per cent and durometer reading of 70 points. These properties make it practical for transmission and power steering applications as well as fabricating into any type industrial rubber part. Developed by **Goshen Rubber Co.**, Dept. NED-1, Goshen, Ind.

For more details circle NED-919 A4 on enclosed inquiry slip

SUCTION HOSE regains shape after crushing



Treated hard twisted cord is used in Revelation smoothbore suction hose. It returns to its original shape after being run over or crushed. Hose can be made with straight or enlarged ends in sizes from 1 to 3 in. ID, with weights from 75 to 262 lb per 100 ft. Standard lengths are 10, 12½, 15, 20, 25 and 50 ft. Samples are available from manufacturer, **Hamilton Rubber Mfg. Corp.**, 51 Mead St., Trenton 3, N. J.

For more details circle NED-920 A4 on enclosed inquiry slip

NOW... Correct Taper —FOR MAXIMUM GRIP —FOR EASY REMOVAL IN INTERCHANGEABLE TAPERED BUSHINGS AND SPROCKETS

BOSTON Gear

SHOLD-A-GRIP

Correct Taper
—FOR STRONGER, SLIP-PROOF GRIP
—FOR EASY REMOVAL Provides maximum holding power, even on worn shafts. Permits easy disassembly.

Broader Size Range
FIT SHAFTS ½" to 2½" BY 16THS
Any commonly used sprocket, ½" to 2¼" pitch can be interchanged on an extended range of shaft sizes.

FOR COMPLETE INFORMATION, ask your BOSTON Gear Distributor, or write: Boston Gear Works, 69 Hayward St., Quincy 71, Mass.

SEE YOUR BOSTON Gear DISTRIBUTOR

For more details circle NED-921 A4 on enclosed inquiry slip

A "PEN" MICROSCOPE at work in quality control at Bridgeport-Lycoming

Quality control work at the Bridgeport-Lycoming Division of Avco, manufacturers of aircraft engines and jet engine components, is one of the many applications which leading industrial companies have found for the Pike Model V "Pen" Microscope — the instrument that's no larger than a fountain pen — yet gives magnifications of 40x, 50x or 60x. Ruggedly made and easy to use — yet built with the optical precision of a laboratory microscope.

Ideal for on-the-spot examination of specimens — eliminates time-consuming techniques. Self-illuminating by means of mirror that reflects external light source. Price $15.75.

Write for literature on Pike "Pen" Microscopes and FLASH-O-LENS models combining magnifiers and self-contained light sources

E. W. PIKE & COMPANY
492 NORTH AVENUE ELIZABETH 3, NEW JERSEY

For more details circle NED-922 A4 on enclosed inquiry slip

TEMPILSTIKS°

the amazing Crayons that tell temperatures

in
WELDING
FLAME-CUTTING
TEMPERING
FORGING
CASTING
MOLDING
DRAWING
STRAIGHTENING
HEAT-TREATING
IN GENERAL

$2 each

gives up to 2000 readings

it's this simple:
• Select the Tempilstik° for your working temperature.
• Mark your workpiece with it.
• The Tempilstik° will leave a liquid mark as soon as its specified temperature is reached.

Available in these temperatures (°F)

113	213	313	450	850	1250	1650
125	225	325	500	900	1300	1700
138	238	338	550	950	1350	1750
150	250	350	600	1000	1400	1800
163	263	363	650	1050	1450	1850
175	275	375	700	1100	1500	1900
188	288	388	750	1150	1550	1950
200	300	400	800	1200	1600	2000

Also available in pellet and liquid form.

TEMPIL CORPORATION
11 West 25th St., New York 10, N. Y.

FREE—Tempil° "Basic Guide to Ferrous Metallurgy" —14¼" by 21" plastic-laminated wall chart in color. Send for sample pellets, stating temperature of interest to you.

NAME _____
COMPANY _____
ADDRESS _____

For more details circle NED-923 A4 on enclosed inquiry slip

REDUCE COSTS ON "SMALL-WORK" GRINDING & FINISHING JOBS with

Foredom FLEXIBLE SHAFT MACHINES

- FEATHER - WEIGHT, finger-tip-controlled handpiece (pencil size or larger) which eliminates operator fatigue.
- CHOICE OF 5 HANDPIECE TYPES (all instantly interchangeable). You fit the handpiece to the job at hand.
- EXTRA GOOD FLEXING QUALITIES in the flexible shaft assembly for effortless maneuverability.
- LONGER MOTOR LIFE because motor is not dwarfed to fit the hand.
- HIGH SPEED (14000 RPM) which does not drop precipitately under load.
- SILENCER-EQUIPPED flexible shaft for vibration-free performance.

BENCH OR HANG UP MODELS FOR HEAVY OR LIGHT DUTY

Also flexible-shaft tools attachable to your own drill press or motor

Use Foredoms to GRIND, POLISH, DRILL, ROUT, CARVE, MILL, SAW, SLOT, CLEAN, SAND, ETCH, ENGRAVE, etc., etc.

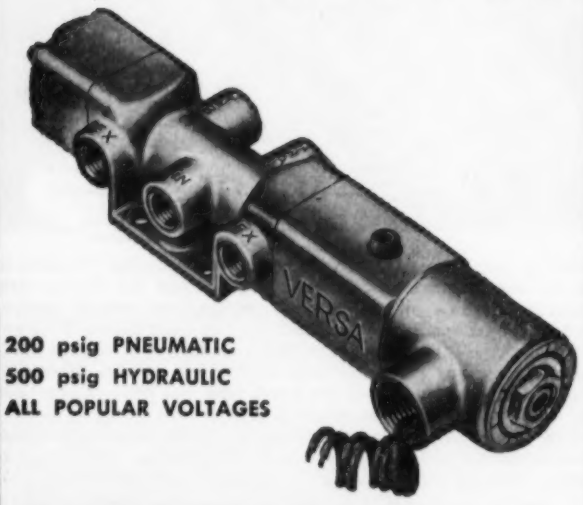
Write for Catalog 5266

FOREDOM Electric Co., Dept. 5266 27 Park Place, N.Y. 7, N.Y.

▲ For more details circle NED-924 A4 on enclosed inquiry slip ▲

NEW *single and double* SOLENOID ACTUATION

FOR ANY MODEL OF VERSA VALVE
TWO-WAY THREE-WAY FOUR-WAY
1/8, 1/4, 3/8, & 1/2 NPT



200 psig PNEUMATIC
500 psig HYDRAULIC
ALL POPULAR VOLTAGES

OVER 1000 MODELS

This presentation adds another milestone in VERSA's progressive attempt to give industry THE MOST COMPLETE LINE for your air or low pressure hydraulic valve selection. The precision manufacturing and dependability which have made VERSA'S HAND, FOOT, CAM and PILOT actuated models so popular are embodied in these new solenoid actuated models. All sizes and types available with side ports or for manifold mounting.

FEATURES

Compactness, modern appearance, speed of operation, low current consumption, low cost and dependability are features you will find in all VERSA SOLENOID VALVES. These features and many more result from the use of a relatively small solenoid to control a pilot which provides the positive force for shifting the valve plunger. VERSA VALVES are functionally designed and quality produced to give millions of cycles of trouble-free performance. And all solenoid models incorporate VERSA'S exclusive "anti-extrusion" arrangement of all seals.

Make VERSA VALVES your standard.

SEND FOR YOUR FREE CATALOG AND DATA SHEETS

VERSA PRODUCTS COMPANY, INCORPORATED
249 SCHOLES STREET BROOKLYN, NEW YORK

▲ For more details circle NED-925 A4 on enclosed inquiry slip ▲

New Literature & Catalogs

Multiple Hole-Punching System

Wales-Strippit Corp.—Economical method for punching unlimited hole patterns in sheet metal parts is provided by the Wales multiple hole-punching system, described in illustrated catalog MH of 8 pages. It utilizes a new retainer plate for punch assemblies. Entire assembly can be made up outside the stamping press or press brake.

▲ For more details circle NED-926 A4 on enclosed inquiry slip ▲

Large Scale Freeze Drying

F. J. Stokes Machine Co.—Drying by sublimation under controlled vacuum conditions, or freeze drying, is subject of 16-page illustrated brochure 735. Principles, methods and benefits of the process, applied on the industrial scale to preservation of food, blood plasma, serums and vaccines and preparation of pharmaceuticals and biologicals, are related.

▲ For more details circle NED-927 A4 on enclosed inquiry slip ▲

Special Markers & Labels

W. H. Brady Co.—Actual-size illustrations of pressure-sensitive markers and labels, made for special applications, are shown in 4-page bulletin 132. Included are trade marks, instruction, inspection, part numbers, Underwriters' and serially numbered labels. Sample dispenser card with variety of labels is also sent.

▲ For more details circle NED-928 A4 on enclosed inquiry slip ▲

Electronic Techniques & Designs

Plug-in design principles for electronic components and methods for their incorporation into electronic equipment are outlined in this extensive handbook of 11 tabbed sections, "Ideas-Techniques-Designs." Data and planning sheets on plug-in packages and basic chassis for unitizing equipment and giving it 30-second interchangeability are included. Almost 1-in. thick, manual contains detailed engineering data and drawings and specifications on a broad product line. Available on letterhead request from Alden Products Co., 117 N. Main St., Brockton 64R, Mass.

▲ For more details circle NED-929 A4 on enclosed inquiry slip ▲

Dimensional Air Gaging

Federal Products Corp.—Dimensionair air gage which features calibrated dial, single master system is subject of 24-page illustrated catalog No. 53B. Construction features, detailed application data and photos, specifications and accessories are covered.

▲ For more details circle NED-930 A4 on enclosed inquiry slip ▲

Hardboard Cutting Guide

Masonite Corp.—Quick calculations for sawing Masonite Presdwood into the most economical sizes can be made on a pocket-size cutting chart. One setting shows strips or pieces of desired size that can be cut from various size sheets which are available, percentage of panel used in each width or length and lowest cost cuts.

▲ For more details circle NED-931 A4 on enclosed inquiry slip ▲

Specific Gravity Meter

American Recording Chart Co.—Accurate transmission of specific gravity records at any distance, whether it be in feet or miles, is provided by the Arcco-Anubis Metameter recording and transmitting liquid Gravitometer. It is described and illustrated in 2-page bulletin 11I-R2B. Signal transmission can be by wire or radio.

▲ For more details circle NED-932 A4 on enclosed inquiry slip ▲

Motor Frame Selection

Westinghouse Electric Corp.—Comparison between "old" and "new" NEMA standard dimensions for alternating current motors from 1 to 30 hp is contained in the 18 x 24-in. motor frame selection chart. Covered are polyphase squirrel-cage, polyphase wound rotor and single-phase foot mounted motors. Dimensions for flange mounted, dripproof and totally enclosed fan-cooled motors are also given.

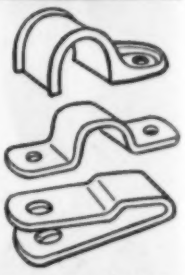
▲ For more details circle NED-933 A4 on enclosed inquiry slip ▲

Die Manual

Verson Allsteel Press Co.—112-page illustrated "Die Manual" is a pictorial presentation of press brake dies and tooling with details on how to select dies for special jobs. Tables show such items as tons of pressure required for various jobs, shear strengths of various gage metals and standard sheet gages. Manual covers most commonly used dies, each one being individually illustrated.

▲ For more details circle NED-934 A4 on enclosed inquiry slip ▲

Many Styles—All Sizes in ALL MATERIALS

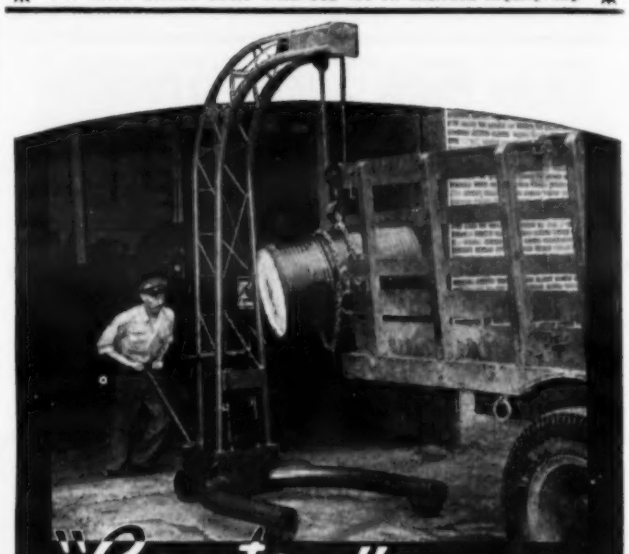


Original designers and manufacturers . . . Commercial can offer you in CPC Clamps the very best know-how, production and delivery. There is a CPC Plastic Clamp . . . or one can be designed . . . for every application. Durable, no corrosion. Ideal for cable, tubing, wiring, conduit. Save on cost, too! Send for sample.

2818 W. NORTH AVE. • CHICAGO 47, ILLINOIS

COMMERCIAL PLASTICS CO.

▲ For more details circle NED-935 A4 on enclosed inquiry slip ▲

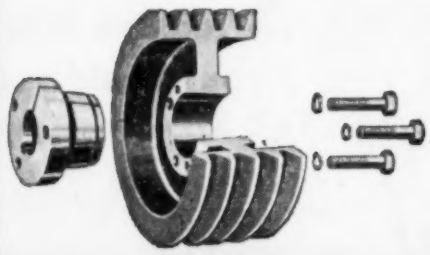


"Canton"
THE LOW COST CRANE with a HUNDRED USES

Just one of a hundred lifting and transporting jobs made easy with a CANTON Portable Crane. Loads up to 3 tons can be moved anywhere in the shop by one man.

The HILL ACME CO.
"CANTON" DIVISION 1201 W. 65TH ST., CLEVELAND 2, OHIO

▲ For more details circle NED-936 A4 on enclosed inquiry slip ▲



more sheaves used with this HUB CONSTRUCTION than any other type

More and more manufacturers are using this hub and rim combination. They know that taking off or putting on ordinary sheaves takes a lot of time and trouble, resulting in unnecessary machine down-time.

Wood's "Sure-Grip" Sheaves with interchangeable, one-piece tapered hubs (split from end to end) permit you to change the hub quickly and easily to fit shaft size, or to change the sheave to provide different speed. Dimensions are standardized for interchangeability, in A, B, C, D and E groove sections. Write for our descriptive catalog 192 and consult your Wood's Industrial Distributor.

T. B. Wood's SONS COMPANY
CHAMBERSBURG, PA.
Mechanical Power Transmission Manufacturers—Since 1857.

CAMBRIDGE, MASS. • NEWARK, N. J. • DALLAS, TEXAS • CLEVELAND, O.

▲ For more details circle NED-937 A4 on enclosed inquiry slip ▲

NO WASTE EFFORT

...when you move loads over

ROWE ADJUST-A-DOCKS

There's never a hitch in straight-line travel between plant and truck or rail car. With Rowe Adjust-A-Docks those time-consuming, expensive rehandlings during loading or unloading are eliminated.

Write today for a free, profusely illustrated and informative booklet detailing Rowe equipment for more effective dock handling.

ROWE METHODS INC.

2534-1 DETROIT AVENUE • CLEVELAND 13, OHIO

▲ For more details circle NED-938 A4 on enclosed inquiry slip ▲

FOR TOP RESULTS IN CYANIDE COPPER PLATING USE

UDYLITE

FORGED-COPPER BALL ANODES

You'll copper-plate a finer finish faster with Udylite Forged-Copper Ball Anodes. That's because they combine all the advantages of the economical ball shape, PLUS fine, uniform grain structure. 99% pure copper, made from virgin metals, Forged-Copper Ball Anodes by Udylite give you these benefits:

1. A smoother plating finish through elimination of oxide inclusions and anode sludging.
2. Fewer rejects, greater operating economy because they corrode more smoothly and uniformly.
3. Provide easier buffing of copper finish through extra-smooth deposit.
4. Make ideal fine-grained undercoat for nickel and chrome.
5. Assure denser deposits so essential in the copper plating used for selective carburizing.

You'll find, too, that Forged-Copper Balls produce consistently excellent results with Bright Cyanide Copper where smoothness of deposit is of utmost importance.

For full information, or to order your supply, call your Udylite technical man today, or write direct to THE UDYLITE CORPORATION, *Detroit 11, Michigan.*

THE UDYLITE CORPORATION
DETROIT 11, MICHIGAN
PIONEER OF A BETTER WAY IN PLATING

▲ For more details circle NED-939 A4 on enclosed inquiry slip ▲

DESIGNING A NEW PRODUCT?

send for

free booklet

with "*How-to-use*" data on

MASONITE PRESDWOOD

Here's help for harassed industrial designers. Fact-filled, illustrated booklet tells how and where Masonite Presdwood® adds strength, durability and sales appeal to products in scores of fields. These strong, grainless, all-wood hardboard panels are 28 ways better . . . you can even bend them permanently. Come in 44 types and thicknesses. Send for your copy of "A Guide for Product Designers" today. No obligation.

PRESDWOOD WOOD MADE BETTER

NATURALLY STRONGER WITH LIGNIN

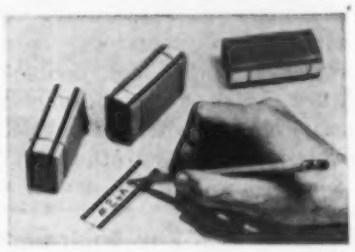
MASONITE® CORPORATION
DEPT. NED-1, BOX 777, CHICAGO 90 ILL.

"Masonite" signifies that Masonite Corporation is the source of the product

▲ For more details circle NED-940 A4 on enclosed inquiry slip ▲

New Processes & Materials

PRECUT WRITE-ON LABELS
lengths and widths to specification



Cut-to-size strips or labels of Labelon self-adhesive "write on it" tape are available to specification in 1 to 6-in. lengths and 5/16 to 3-in. widths. Any of a variety of border colors can be specified. They can be written on with any dry blunt point such as pencil or stylus. Legend is protected by transparent plastic outer layer against smudging, dirt, oil, water and most acids and chemicals. Tape resists temperatures from −40 to 150° F and will not curl or discolor with age. Strips are mounted on a polyethylene paper from which they peel cleanly. Made by **Labelon Tape Co.,** 20 Greenleaf St., Rochester 9, N. Y.

▲ For more details circle NED-941 A4 on enclosed inquiry slip ▲

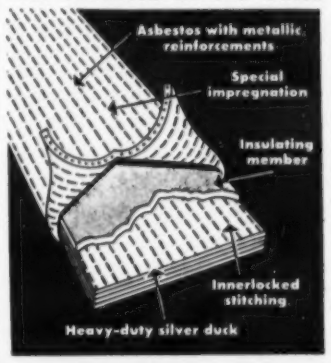
GENERAL-PURPOSE CEMENT
useful for felts and insulations

Red in color, type 717 general-purpose rubber and resin solvent cement is especially designed to bond light fabrics, felts and insulation materials. It is also useful for bonding a wide range of light weight materials to wood, masonry, metal, glass, rubber and plastics. Flammable cement can be brush applied and is available in 1, 5 and 55-gallon containers. Made by **Flintkote Co.,** Industrial Products Div., Dept. D1, 30 Rockefeller Plaza, New York 20, N. Y.

▲ For more details circle NED-942 A4 on enclosed inquiry slip ▲

HEAT RESISTANT BELTING
withstands temperatures to 600° F

Strength and resistance to impact damage are given to Sahara armored belting by incorporation of wire and asbestos in the outer ply. It is made in two types: Insulated, for handling materials of 300 to 450° F and Super Insulated for 450 to 600° F. Core material is tight-woven duck with tensile strength of over 750 lb per inch of width. Asbestos content of surface permits conveying red hot lumps without damage to belt. Made by **Imperial Belting Co.,** Dept. NED, 1750 S. Kilbourn Ave., Chicago 23, Ill.



▲ For more details circle NED-943 A4 on enclosed inquiry slip ▲

GENERAL PLATE

ALCUPLATE®

(Copper-Clad Aluminum)

Reduces Costs

OVER SOLID COPPER OR BRASS

ALCUPLATE Provides High Electrical Conductivity, Soft-Soldering Surfaces, Good Heat Dissipation, Light Weight

Now, you can reduce your cost 15–30% or more over an equal area of solid copper or brass by using General Plate ALCUPLATE.

Made by *permanently bonding* a thin layer of copper to one or both sides of thicker aluminum, ALCUPLATE has practically the same physical and electrical properties as copper, plus the light weight of aluminum. The copper provides an ideal surface for soft-soldering operations, electroplating and other finishes.

ALCUPLATE is widely used in the electrical and electronic fields for terminals, clips, shims, small motor housings, electronic component cases, chassis, and brackets. It is also used for heat transfer assemblies, fin and tube type radiators, printed circuits, costume jewelry and similar applications.

ALCUPLATE can be fabricated by stamping, drawing or forming. Its malleability permits its use in the manufacture of many parts from work-hardened rather than annealed or dead soft materials.

ALCUPLATE is available in coils and flat cut lengths, copper clad on one or both sides of aluminum, ⅛" thick x 13" wide and under.

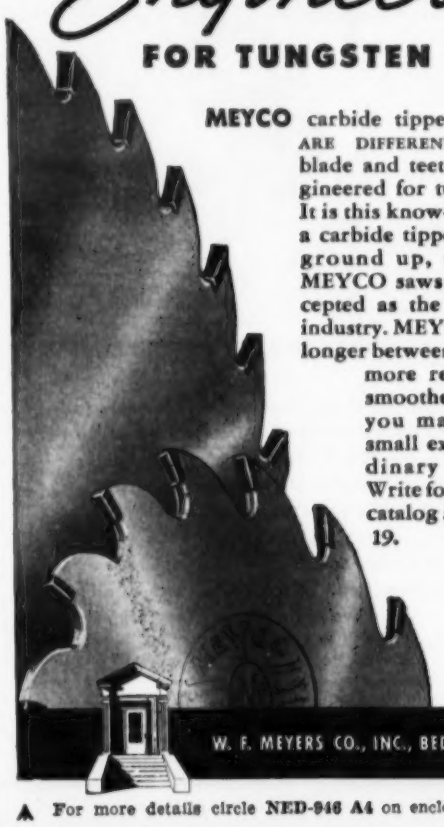
Technical Data Bulletin No. 702C gives full details. Write for a copy, today.

METALS & CONTROLS CORPORATION
GENERAL PLATE DIVISION
81 FOREST STREET, ATTLEBORO, MASS.

▲ For more details circle NED-945 A4 on enclosed inquiry slip ▲

Engineered

FOR TUNGSTEN CARBIDE



MEYCO carbide tipped circular saws ARE DIFFERENT, because the blade and teeth have been engineered for tungsten carbide. It is this know-how of building a carbide tipped saw from the ground up, that has made MEYCO saws popular and accepted as the standard of the industry. MEYCO saws will run longer between grinds, give you more regrinds, produce smoother cuts and save you many times their small extra cost over ordinary circular saws. Write for fully descriptive catalog and price list No. 19.

W. F. MEYERS CO., INC., BEDFORD, INDIANA

▲ For more details circle NED-946 A4 on enclosed inquiry slip ▲

DENISON Hydraulic PUMPS and CONTROLS

For Every Need—to 5000 psi

Denison offers today's most rapidly growing line of oil-hydraulic pumps, motors, and control valves for every need—for operation at all pressures to 5000 psi. Backed by 27 years of specialized experience in oil-hydraulics, Denison equipment has proved its extra efficiency and durability under long, hard, continuous service of all kinds. Write for Denison catalogs on:

Axial-Piston Fluid Motors . . . Vane-type Fluid Motors . . Axial Piston Pumps . . . Vane-Type Pumps . . . Complete Pumping Units . . . Directional Controls . . . Pressure Controls . . . Sequence Controls . . . Relief Valves . . . Pressure Reducing Valves . . . Multi-Range Flow Controls . . . Check Valves . . . Surge Damping Controls . . . and other types of hydraulic equipment.

The DENISON Engineering Company
1151 DUBLIN ROAD, COLUMBUS 16, OHIO

DENISON HydrOILics

"The Finest Money Can Buy!"

▲ For more details circle NED-944 A4 on enclosed inquiry slip ▲

helps prevent colds

Production line and office workers can now work in absolute comfort

The new low priced ELECTRO MAT throws off a gentle warmth that keeps workers healthy, happy and comfortable. 14" x 21" portable foot warmer is safe and economical . . . consuming less power than a 75 Watt light bulb. It is made of high quality neoprene rubber.

Attention Employers

Increase the efficiency of your employees and help prevent colds which cause absenteeism by equipping each employee with an Electro Mat.

Mail check or money order today Only **$6.95** f.o.b. factory.

IMPORTANT SAVING: If 6 or more Electro Mats ordered price is only $5.95

Please send me: ☐ Electro Mat at $6.95 each. Enclosed is my check ☐ money order ☐ ☐ C.O.D. I am enclosing $1.00. Will pay postman balance of $5.95 plus C.O.D. and freight charges.

Name _____
Street _____ Zone ____
City _____ State _____

10 Day Money Back Guarantee

Dealer Inquiries Invited. INTERSTATE RUBBER PRODUCTS CORP., Dept. 114 908 Avila St., Los Angeles 12, California

▲ For more details circle NED-947 A4 on enclosed inquiry slip ▲

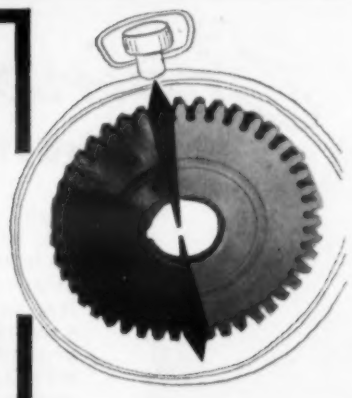
GUARDIAN Relays

Guardian Relays do "stop and go" duty all along the nation's highways, guiding motorists safely. For those who "run the light" Guardian Relays come to the rescue operating X-ray and physio-therapy equipment. Insurance companies and other business concerns use automatic business machines controlled by Guardian Relays. And so continues the unbroken line of control applications including: starting—stopping—timing—counting—computing—sorting—lighting—conveying—interval timing—flying—navigation—radar—armament and power. Send blueprint of your control application. Write.

GUARDIAN ELECTRIC
1626-A W. WALNUT STREET CHICAGO 12, ILLINOIS
A COMPLETE LINE OF RELAYS SERVING AMERICAN INDUSTRY

▲ For more details circle NED-949 A4 on enclosed inquiry slip ▲

SAVE HOURS *in finishing time with* LIQUAMATTE *wet blasting*



Tools, dies, molds, engine parts, etc. requiring 1 to 6 hours to finish by hand methods are now finished in from 30 seconds to 10 minutes in a Liquamatte Wet Blasting Machine. It produces close tolerance finishes mechanically at high speeds that previously have been impossible to achieve except by hand methods. For example, at the Oling Tool Company, a Liquamatte is saving an average of 50% on former time and labor requirements for surfacing tools prior to plating. On some items, such as drill bits, savings as high as 80% have been effected. Send for Bulletin 43 for the complete story.

American WHEELABRATOR & EQUIPMENT CORP. | 508 S. Byrkit St., Mishawaka, Indiana

▲ For more details circle NED-950 A4 on enclosed inquiry slip ▲

Check Temperatures Instantly... Accurately with Alnor TYPE 1500 PORTABLE PYROMETER

Wherever temperature readings are required—on the production line, in the laboratory or in the field—this sturdy precision instrument can bring you instant, accurate results.

Here's Why

It's Fast . . . in operation and quickly read. Precision movement designed to laboratory standards. Direct reading scale face is easily understood—no slide wires or conversion tables necessary.

It's Accurate . . . consistently to within ¾ of one percent under almost all variable conditions. Sturdy, protective case assures continued accuracy in toughest portable service. Ten scale ranges available, from 0-400° to 0-3000°F. Equivalent Centigrade scales available at no extra cost.

It's Portable . . . compact size, 6½"x6"x3", and light weight make this pyrometer highly portable and easy to use anywhere. Write today for complete details and prices. Illinois Testing Laboratories, Inc., Room 529, 420 N. La Salle Street, Chicago 10, Illinois.

Send for Bulletin on 1500 Pyrometer.

Alnor PRECISION INSTRUMENTS FOR EVERY INDUSTRY

▲ For more details circle NED-951 A4 on enclosed inquiry slip ▲

New Literature & Catalogs

Micro Switch Data Sheets

Minneapolis-Honeywell Regulator Co., Micro Div.—Six available data sheets numbered 64, 66, 68a, 71, P74 and P75 respectively cover low-force switches with lever actuators; precision roller plunger switches; double-pole, double-throw switch; subminiature switch; magnetic blow-out switch and one-way actuation switches. Dimensional drawings, ratings, characteristics and other data are given.

▲ For more details circle NED-952 A4 on enclosed inquiry slip ▲

Drafting & X-Ray Equipment

Stacor Equipment Co.—20-page catalog 553 on drafting room furniture, and drawing, tracing and x-ray equipment demonstrates the interrelated working efficiency of company's entire line. Production and design features of each unit are detailed to give reader an understanding of its adaptability to every type of business and industry. Theme featured throughout is "Steel makes the difference—Stacor makes the difference count."

▲ For more details circle NED-953 A4 on enclosed inquiry slip ▲

Portable Conveyors

Lake Shore Engineering Co.—Portable conveyors for handling bulk and package materials are described in 4-page catalog 6 with performance data, construction features and specifications. Units for handling coal and aggregate material, bulk and package goods; a portable or stationary package conveyor; and an all-aluminum hydraulic drive conveyor are covered.

▲ For more details circle NED-954 A4 on enclosed inquiry slip ▲

Dual-Purpose Precision Lathe

Monarch Machine Tool Co.—Time- and cost-saving adaptability of 13-in. model EE precision lathe for manufacturing and toolroom applications is emphasized in 20-page booklet 502-1. Design advances incorporated in this dual-purpose machine include built-in constant surface cutting speed, all-hydraulic tailstock, infinitely variable speeds up to 2000 rpm, electrical speed change, four-way rapid tool traverse and unlimited flexibility.

▲ For more details circle NED-955 A4 on enclosed inquiry slip ▲

Instrument & Control Boards

Continental Electrical Equipment Co.—In eight illustrated pages, bulletin 700 shows instrument and control boards for production and quality control in process industries, refineries, power plants, laboratories and manufacturing. Standard NEMA designs for power switchgear assemblies are illustrated and described.

▲ For more details circle NED-956 A4 on enclosed inquiry slip ▲

Electric Motors

General Electric Co.—Tri-Clad 55 motors built in 1 to 20-hp ratings to revised NEMA dimensions are featured in three well-illustrated bulletins. These cover maintenance, performance and protective features and each includes large cut-away drawings. Sixteen page booklet GEA-6013 shows dripproof units; 8-page GEA-6012, enclosed units; and 14-page GEA-6027, gearmotors.

▲ For more details circle NED-957 A4 on enclosed inquiry slip ▲

Industrial Ovens

W. W. Sly Mfg. Co., Industrial Oven Div.—Thirteen types of Convectioneered industrial ovens are featured in 12-page illustrated bulletin No. 200. Units are available in sizes from 100,000 to 5,000,000 Btu/hr. Types include box, multicompartment, vertical and various conveyorized arrangements.

▲ For more details circle NED-958 A4 on enclosed inquiry slip ▲

Process Equipment

Quaid Fabrications, Inc.—Facilities for custom fabrication of process industry equipment in standard and special alloys are given in illustrated booklet No. 10 of six pages. They range from equipment for small precision work to 5-ton pieces. Specialty is heat exchanger equipment and light metal work, including titanium, magnesium, aluminum and dural.

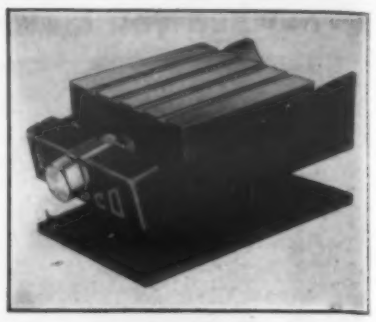
▲ For more details circle NED-959 A4 on enclosed inquiry slip ▲

Sound-Deadening Coating

Nox-Rust Chemical Corp., Mastics Div.—How and why application of Nox-Sound mastic coating can eliminate "tinniness" from a product and replace it with a "feel of solidity" is told in 4-page folder. Photos show application process. Coating also insulates, waterproofs and rustproofs.

▲ For more details circle NED-960 A4 on enclosed inquiry slip ▲

IMPROVED MACHINE LEVELING JACK is 50% stronger yet lower in height.



Engineering improvements have made this Jack 50% stronger yet lower in height. This was accomplished by redesigning the Empco Jack so that the adjusting screw always remains cradled in the assembly. This insures full bearing of either front or back collar at any stage of operation.

Once the machine is set on Empco Jacks, the simple turning of adjusting screw, with a hand wrench will lower or raise the machine until your level indicator reads "zero". With this feature, periodic machine leveling can be done in a matter of minutes.

To reduce vibration, Vi-Sorb Mounting Pads are available with each style Empco Jack. These pads substantially reduce vibration, the percentage of reduction usually depends upon the thickness of the pad that is used.

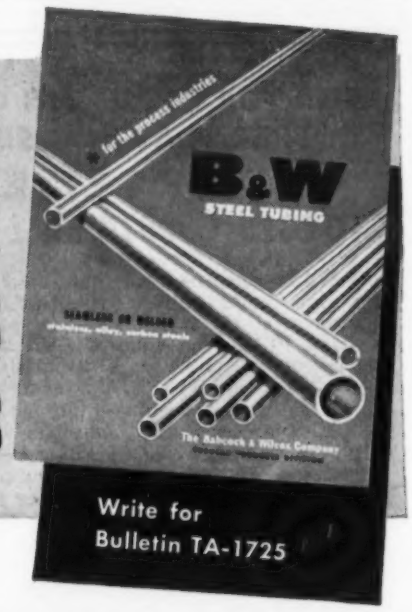
Level machine installations with periodical re-leveling is essential to lower costs of machine maintenance. These costs are further reduced by the use of Vi-Sorb Mounting pads under every Empco Leveling Jack.

Available in three styles: JC-1 (standard) and JC-2 (heavy duty) pictured here, and the newest style JS particularly designed for use with anchor bolts. Many models in all styles with minimum height ranging from 1⅞" to 4".

For complete specifications and prices write the **Enterprise Machine Parts Corporation,** 2727 Jerome Ave., Detroit 12, Michigan. *Advt.*

▲ For more details circle NED-961 A4 on enclosed inquiry slip ▲

FOR THE PROCESS INDUSTRIES



Write for Bulletin TA-1725

. . . informative bulletin on Carbon, Alloy and Stainless Tubing — Seamless and Welded. Gives listing of B&W Tubing Steels with Tubing Properties Chart.

TA-4000(LP)

THE BABCOCK & WILCOX COMPANY
TUBULAR PRODUCTS DIVISION
Beaver Falls, Pa.—Seamless Tubing; Welded Stainless Steel Tubing
Alliance, Ohio—Welded Carbon Steel Tubing

▲ For more details circle NED-962 A4 on enclosed inquiry slip ▲

COOLING CAPACITY for a battery of injection molds

with Acme DRY-EX®

Keep your molds at their most efficient operating temperature at all times with an Acme Dry-Ex Liquid Chiller. Models ranging from 5 to 260 tons of refrigeration and for fluid circulation rates from 10 to 600 gallons per minute enable you to select a unit "tailored to your production needs."

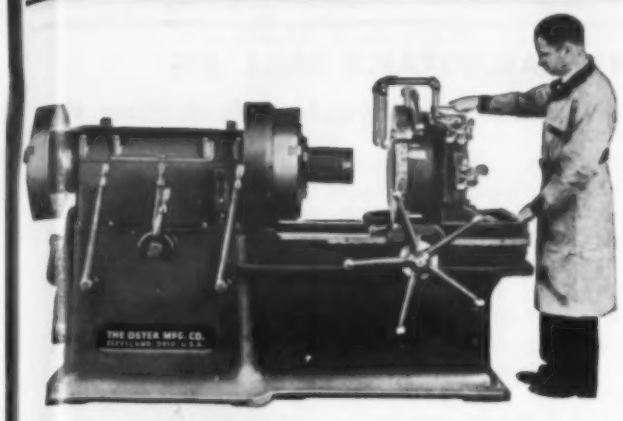
You can forget your mold cooling problems when an Acme Dry-Ex is installed.

Acme also incorporates their Dry-Ex Chiller in the new Flow-Cold Package complete with all necessary system components. Investigate this sensational package for your 2 to 15 ton requirements.

Write Dept. N for more information on Acme Dry-Ex Chillers.

ACME AIR CONDITIONING REFRIGERATION
ACME INDUSTRIES, INC.
JACKSON, MICHIGAN
Continuously serving the Refrigeration and Air Conditioning Industry since 1919

▲ For more details circle NED-963 A4 on enclosed inquiry slip ▲



The OSTER "RAPIDUCTION"

FAST AND ACCURATE

The Oster No. 6A "Rapiduction" is designed for large-scale production threading. Its many spindle speeds allow every size of pipe to be threaded at maximum speed. Throughout its entire standard pipe range of 1" to 6" and bolt range of 1" to 4" die-head change is never necessary. From machine bed to die-head the "Rapiduction" is quality built.

For the full story on the complete line of Oster threading machines see your local Oster Distributor.

THE OSTER MANUFACTURING CO.
Main Office and Factory:
2066 East 61st St. • Cleveland 3, Ohio

Builders of Cost Reducing Threading Equipment since 1893

▲ For more details circle NED-964 A4 on enclosed inquiry slip ▲

Handles ANY Job Requiring a Baked Finish

Despatch FINISH BAKING OVENS

Minneapolis-Honeywell Regulator Company . . . operates a number of Despatch Ovens for various jobs. The operator running the above RS-4 Electric Finish Baking Oven, for baking finishes on relay cases, is particularly enthusiastic. He likes the accurate temperature control, ease of loading and avoidance of heat loss. He figures that the RS Oven, installed in 1946, paid for itself years ago through the saving in drying time. Does your operation require controlled, uniform heat up to 500°?

Write for the Despatch RS Bulletin.

DESPATCH OVEN CO. Established in 1902

Manufacturers of ovens for: Paint Finishing...Dehydrating . . . Curing . . . All Industrial and Laboratory Applications.

325 DESPATCH BLDG., MINNEAPOLIS 14, MINN.

▲ For more details circle NED-965 A4 on enclosed inquiry slip ▲

NOW...a Binks Air Compressor for every industrial use!

Send today for this helpful 16-page DATA BOOK

Whatever your compressor needs may be.. we can match your specific requirements. Choose from this complete line of performance-proved units—5 types in practically any size or capacity. Now you can have exactly the air compressor you need—*right* in performance, dependability and price.

Write at once for CATALOG 810—16 pages packed with information to help you select Air Compressors. Address: Binks Mfg. Co., 3122-34 W. Carroll Ave., Chicago 12, Ill.

Binks EVERYTHING FOR SPRAY PAINTING

GUNS • SPRAY BOOTHS • MATERIAL TANKS • EXTRACTORS & ACCESSORIES

REPRESENTATIVES IN PRINCIPAL U. S. & CANADIAN CITIES • SEE YOUR CLASSIFIED DIRECTORY

▲ For more details circle NED-966 A4 on enclosed inquiry slip ▲

BOX STITCHER
handles heavy and light duty jobs

Heavy duty work as well as light duty stitching jobs are handled by this N-5 Acme-Morrison box stitcher available in post, arm, combination post and arm, side seam and top types. Line makes it possible to stitch all types of corrugated and solid fiber boxes. With small hand lever, stitcher can be adjusted for work thicknesses from 1/16 to ¾-in. Machine mechanism is accessible for maintenance, and formers, flat knife and drivers are reversible for longer life. Wire tangling is eliminated by built-in brake mechanism of coil holder supplied with machine. Made by **Acme Steel Co.**, 2822 Archer Ave., Chicago 8, Ill.

▲ For more details circle NED-967 A4 on enclosed inquiry slip ▲

HUMIDIFIER
small portable unit

Standard model 60 humidifier, a small portable unit, can be filled manually or connected to a water supply for automatic filling. With a small outlet nozzle it vaporizes 1 pt of water per hour and with a 3-in. adjustable elbow for horizontal vapor distribution the vaporization rate is 2 pt per hour. Humidifier is made of rustproof materials, has a quiet motor and a water level indicator. Model 32-W Humidostat for controlling relative humidity is available as an accessory. Made by **Standard Engineering Works**, P. O. Box 433, Pawtucket, R. I.

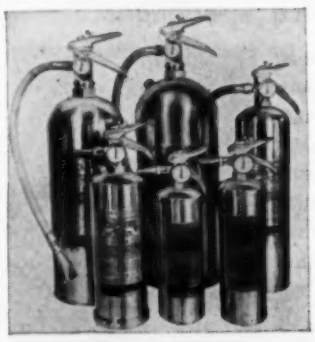
▲ For more details circle NED-968 A4 on enclosed inquiry slip ▲

SERVO MOTOR-GENERATOR
compact unit weighs 7.6 ounces

Stator assemblies of both motor and generator sections of the type R804 low inertia servomotor-damping generator combination are integrally cast in a thermosetting plastic material. Unit weighs only 7.6 oz, measures 1.062 in. diameter and 3 in. long. Stainless steel housings and cast stators provide protection against effects of high temperature, humidity, vibration and shock. Mounting can be by tapped holes in motor face or by clamps. Motor is a 115-v, 400-cycle, fixed-phase type and draws 3.5 w. Generator has 115-v 400-cycle excitation and an output of 0.500-v per 1000 rpm minimum. Generator portion can be obtained as a separate unit or integral with certain other Kearfott servo motors where higher torque requirements exist. Made by **Kearfott Co.**, Dept. N, 1150 McBride Ave., Little Falls, N. J.

▲ For more details circle NED-969 A4 on enclosed inquiry slip ▲

FIRE EXTINGUISHER
dry type has failureproof valve



Possibility of valve failure in the improved Redi-Flo Mark II dry chemical stored pressure type fire extinguisher is eliminated by incorporation of the Spheral Valve. Dry chemical particles cannot foul the valve, nor can accidental distortion of its mechanism interfere with operation. Extinguisher holds its operating pressure even though partially discharged repeatedly. It is charged with Dri-Kem fluid, noncaking powder and is pressurized at 150 and 200 psi with dry nitrogen. Redi-Flo, Mark II extinguishers are supplied in 3, 4, 5, 10 and 20-lb capacities, with a 30-lb unit to be offered shortly. Made by **Stop-Fire, Inc.**, 127 Ashland Pl., Brooklyn 1, N. Y.

▲ For more details circle NED-970 A4 on enclosed inquiry slip ▲

the multi-purpose lifting machine for the small shop

STUEBING DESIGNED • STUEBING ENGINEERED • STUEBING BUILT

Hydrolift Straddle Stacker

here are the FEATURES . . . you want most in a mobile stacker

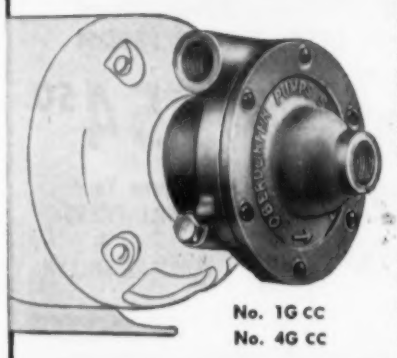
- Capacities to 2000 lbs.
- Power hydraulic telescopic lift.
- 4-wheel stability.
- Light in weight, highly maneuverable.
- Stacking made easy inside railroad cars or motor trucks.
- Low initial cost and upkeep.

The Hydrolift fulfills the demand for an all-purpose hand truck in the average plant. It can be used for handling pallets, skids, dies, drums, barrels, sacked goods, and for numerous other non-routine jobs.

LIFT TRUCKS INC. 2423-2431 Spring Grove Ave. CINCINNATI 14, OHIO

▲ For more details circle NED-971 A4 on enclosed inquiry slip ▲

Close coupled, centrifugal, motor driven OBERDORFER BRONZE PUMPS



No. 1G CC
No. 4G CC

1G cc is complete motor-pump unit with 1/12 H.P., 3450 RPM, 110 volt, A.C. ball bearing thermal overload motor. Motor frame Nema 42 with end bell machined for pump mounting. Pump has mechanical Rotary face type seal.

4G cc is complete motor-pump unit with ⅓ H.P., 3450 RPM, 110 volt, A.C. thermal overload motor. Motor frame Nema 56 with end bell machined for pump mounting. Pump has mechanical Rotary face type seal.

OVERALL DIMENSIONS—Motor and Pump Unit

Pump No.	Height	Width	Length	Suction	Discharge
1G cc	5"	4¾"	9"	⅜ N.P.T.	⅜ N.P.T.
4G cc	6⅝"	6 5/16"	11¼"	¾ N.P.T.	½ N.P.T.

CAPACITIES—Gal. per min. —3450 RPM - Foot Water Head

Ft. Water	0	5	10	15	20	25	30	35
1G cc	7	6½	5	4	1½	—	—	—
4G cc	23	22	20	18	15	12	8	2

See our catalog in Sweet's PRODUCT DESIGN File

Oberdorfer Foundries, Inc., Ind. Pump Div.
241 Thompson Rd. Syracuse, N. Y.

▲ For more details circle NED-972 A4 on enclosed inquiry slip ▲

Now faster, more accurate balancing of ARMATURES—FANS—Light Revolving Parts

the New CROWN Supersensitive BALANCING WAYS

MODEL 1105

Show up instantly the slightest imbalance in the smallest armatures. Supersensitive, pivot-type bearings and four free-turning discs practically eliminate friction drag. No set up or leveling. Portable. Loads up to 35 lbs. and 10" swing.

- SENSITIVE to .006 oz.-in.
- ENDS . . . Slow Trial and Error
- NO CENTERING NEEDED

$48.00 F.O.B. Woodstock, Ill. State or local sales tax extra

USE THIS HANDY COUPON

CROWN INDUSTRIAL PRODUCTS CO.
723 Amsterdam Street, Woodstock, Illinois
☐ Please ship _____ CROWN Balancing Ways, Model 1105 @ $48.00, F.O.B., Woodstock, Illinois.
☐ Please send catalog data only, now.
Name _____
Company _____
Our Purchase Order No. _____
Address _____
City _____ Zone _____ State _____

▲ For more details circle NED-973 A4 on enclosed inquiry slip ▲

Best Buy in Hoists!

...and here's why!

1 Low operating cost.
2 Safe! The only hoist with self-locking, double worm gear which acts as its own load brake.
3 Steel from hook to hook—heavy, positive acting limit switches.
4 Dual voltage motors quickly convert from 220 to 440 volts or vice-versa.
5 Just hang it up, plug in, pull cord (one-hand control) and it goes to work.
6 Assured performance, backed by the exclusive Whiting Warranty Plan.
7 Most standard models shipped from stock.

WHITING ELECTRIC CHAIN HOISTS

Send for Illustrated Bulletin H-112

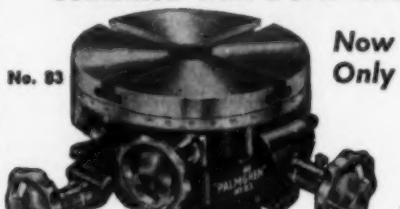
WHITING CORPORATION
15660 Lathrop Ave., Harvey, Ill.

For more details circle NED-974 A4 on enclosed inquiry slip

PALMGREN

ROTARY, INDEX, MILLING TABLE

The Only Table Having Rotary Feed Combined with DUAL CROSS FEEDS!



No. 83

Now Only $54.50

Turns Your DRILL PRESS Into A VERTICAL MILLER

This PALMGREN TABLE is sensational in price, construction and performance. Just what shops need for accurate, precision work. You can mill straight or curved, slot, drill, also rout, rabbet, mortise and sand on wood. Do hundreds of jobs as milling slots, grooves, keyways, squares, hexagons, curves, flats, dovetails, indexing and laying out work.

Designed for use on Drill Press or Milling Machine. It handles all types of metal and woodworking operations and makes your drill press a vertical milling machine. Precision built. It permits close tolerances. Rotary Feed is calibrated in degrees. Cross Feeds in thousandths. Cross slides and feed are 2⅛" each side of center—4½" overall. Has Acme thread cross feed screws, adjustable gibs on cross slides—40 to 1 worm and gear ratio in rotary feed. 4 Bolt slots—2 lock screws.

No. 83 Table Dia. 8", T-Slots ⅝", Base Keyway ⅝", Base Dia. 6¼", Ht. 5", Wt. 37 lbs. Price Only $54.50.

Order Today! Write for new Catalog No. 201

CHICAGO TOOL and ENGINEERING CO.
Mfrs. of PALMGREN PRODUCTS Since 1918
8378 South Chicago Ave. • Chicago 17, Ill.

For more details circle NED-975 A4 on enclosed inquiry slip

NOW...

FAST, ACCURATE SET-UPS FOR ANGULAR GRINDING

Magna-Lock SINE

WHAT IT IS: An electro-magnetic chuck for making precision angular set-ups on surface grinders. Standard gauge blocks insure maximum accuracy. No dials, no scales. Rugged precision-made hinge is only moving part.

WHAT IT DOES: Single or compound angle set-ups made in minutes. Work held securely . . . powerful magnetic attraction minimizes distortion or warpage during machining operation.

Get full details now. Write Dept. ND-14

MAGNA-LOCK, INCORPORATED
Magna-Lock
Magnetic Chucks and Devices
BIG RAPIDS, MICHIGAN, U. S. A.

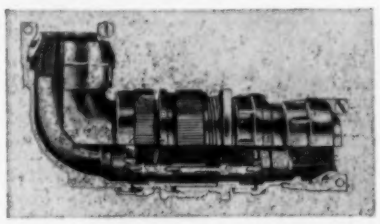
For more details circle NED-976 A4 on enclosed inquiry slip

PORTABLE ELEVATOR
adapted to bar stock handling

Handling and positioning of heavy bar stock is facilitated by this Portelvator with table capacity of 2000 lb and vertical travel of 14 in. Unit can be used to transport heavy billets from dock to stockroom, or from stockroom to saw where stock is height positioned and fed directly from unit itself. Slots between roller pairs enable chain of overhead crane to be wrapped around billets securely. Minimum and maximum height of 18 x 20-in. table is 20 and 34 in., respectively. It is elevated by hand crank from side to allow extension of bar stock over each end. Made by **Hamilton Tool Co.**, 901 Hanover St., Hamilton, O.

For more details circle NED-977 A4 on enclosed inquiry slip

ELECTRICAL CONNECTOR
protects electronic circuits



Sensitive electronic circuits are protected from thermal shock, surface condensation and extreme vibration by the type E "environment resisting" electrical connector. Developed to meet high altitude performance requirements of aircraft, it is designed with an ample working area between insert and grommet for all assembly and soldering operations. Individual wires can be removed or repaired with the connector in place. otting compounds supply the waterproofing. It is approved under military specification MIL-C-5015A (ASG). Made by **Bendix Aviation Corp.**, Scintilla Magneto Div., P.O. Box 188, Sidney, N. Y.

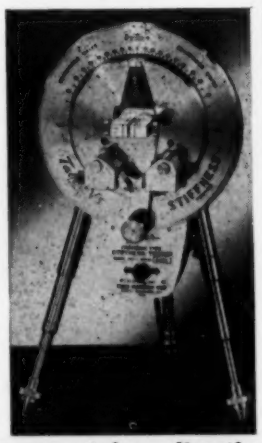
For more details circle NED-978 A4 on enclosed inquiry slip

PIPELINE JACKETS
for cooling or heating purposes

Designed for heating or cooling in pipe lines, removable jacket clamps around the pipe, is sealed with end gaskets and can be installed or removed without interrupting production. It has spiral ribs vulcanized into its interior which not only keep it uniformly spaced but serve to spiral heating or cooling medium at high velocity around the pipe giving a high heat transfer rate. Cold water and steam are typical heating and cooling mediums. Jacket expands so that it will not crack if accidentally frozen during the winter. It is of such high insulating value that it is possible to touch a jacket carrying 30 psi of steam without getting burned and is designed for inside or outside use. Made by **F. R. Gross Co.**, Dept. N-53, 592 Crestview Ave., Akron 20, O.

For more details circle NED-979 A4 on enclosed inquiry slip

STIFFNESS TESTER
for sheet and wire specimens



Both initial and basic stiffness of sheet and wire specimens can be determined by the improved model 150 stiffness tester. New model has eight test ranges instead of six. Flexural rigidity of very thin materials such as cellophane, metal foil, synthetic fibers, watch springs and brush bristles can be determined with the SR150-14 attachment which magnifies dial readings 100 times. Test length, angle of deflection and rate of loading are standardized. Readings are taken directly from the dial. Triple-cut shear is used to blank out precision specimens. Made by **Taber Instrument Corp.**, Section 16, 111 Goundry St., North Tonawanda, N. Y.

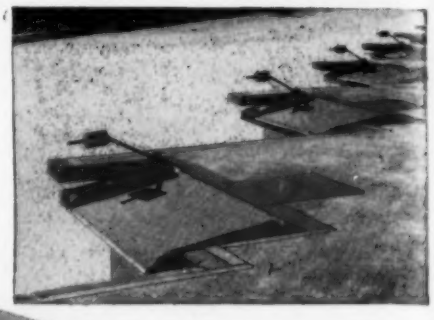
For more details circle NED-980 A4 on enclosed inquiry slip

NEW ADJUSTABLE DRILL JIG
eliminates layout; cuts drilling time

Used for drilling holes through round stock and hex stock from ¼" to 2" and cap screws from ¼" to 1¼", the new Mathewson Adjustable Drill Jig eliminates layout and can cut drilling time on small lots to a fraction. And it eliminates the costs of special jigs for larger quantities. Holes for cotter pins, set screws, drive pins for bayonet joints, oil holes in tubular sections, and wiring holes in cap screws, are all typical of the operation that can be done more economically with this jig. Hole diameters range from .052" to .531", using your A.S.A. standard slip bushings. The hardened V-block has two 60-degree V's for centering round or hexagonal stock, one for ¼" to 21/32" diameter, one for 21/32" to 2" diameter. Adjustable stop for locating work longitudinally for drilling any distance from end, may be used on either side. Adjustable bushing carriers hold slip bushings and clamp work securely. Jig highly successful in permitting use of inexperienced drill operators. For circular write to: **Mathewson Machine Works**, 22 Hancock St., Quincy, Mass. *Advt.*

For more details circle NED-981 A4 on enclosed inquiry slip

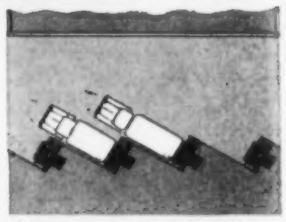
for most efficient dock operation



Specify RITE-HITE® ADJUSTABLE LOADING RAMPS

Permit best utilization of dock area. Insure orderly parking of trucks. Speed dock operations, reduce costs. Simple counterbalance principle. No pipes, pumps, gears, motors. No maintenance required. Years of trouble-free service. A permanent part of dock, Rite-Hite costs little to install.

5 models, 10,000 and 20,000-pound capacities, from $395.00 to $995.00. Get all the facts.



Rite-Hite Loading Ramps installed at an acute angle for safe, efficient material handling in a limited area.

Send for this 8-page BULLETIN Today. Bulletin Dept. B-14

RITE-HITE DIVISION
LOOMIS MACHINE COMPANY
FOURTH & PINE STS., CLARE, MICH.

For more details circle NED-982 A4 on enclosed inquiry slip

AIR POWER—

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WAYNE *Job-Engineered* COMPRESSORS

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January 1954

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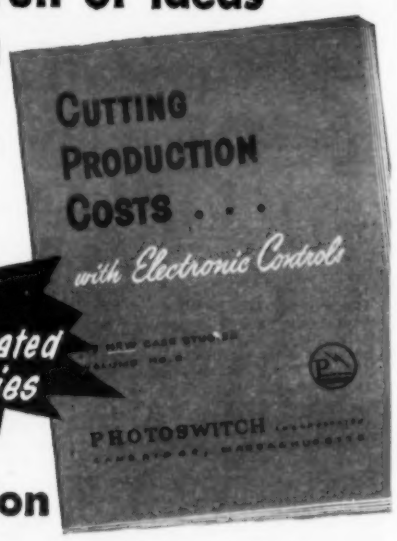

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Platform Trucks

Hamilton Caster & Mfg. Co.—Line of platform trucks with capacities of 800, 1000 and 2000 lb is described and illustrated in 4-page bulletin No. 97. Specifications are given. All are offered with various wheel and handle arrangements and different types of wheels.

For more details circle NED-987 A4 on enclosed inquiry slip

Industrial Clutch Applications

Formsprag Co.—New bi-monthly bulletin of case histories, technical features and news in field of industrial clutches is being published by this company. Use is made of photos and diagrams in covering material on three types of clutch application: over-running, indexing and backstopping. Name of publication is "Sprag Type."

For more details circle NED-988 A4 on enclosed inquiry slip

Stop Watches & Chronographs

Herman H. Sticht Co.—Swiss-made Minerva stop watches with nonbreakable coil spring mechanism are described and illustrated in 12-page catalog. Features and wide variety of models are covered. Over thirty models are covered, along with line of wrist type chronographs.

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Plug & Thread Gages

Size Control Co.—4-page catalog C-53 gives condensed reference material on plain and thread reversible plug gages, AGD thread ring gages and setting plugs, including tolerances, prices and size range available. In addition, a machine for centerless lapping is briefly described and illustrated.

For more details circle NED-990 A4 on enclosed inquiry slip

Power Driven Conveyors

Sage Equipment Co.—Pictorial catalog 1053 of 8 pages shows applications of power driven conveyors for handling many diverse materials. Flexible design as to length, width, curves and adaptability is stressed. Stationary and portable belt, slat and roller types are covered.

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Optically Clear Plastic Sheets

Cast Optics Corp.—Applications for clear cast thermoset Cocor plastic sheets are described and illustrated in 12-page catalog. Material features high abrasion and heat resistance, toughness and solvent resistance. Technical properties and fabrication data are included.

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Lubricating Electric Motors

U. S. Electrical Motors Inc.—Comparisons of electric motor lubrication methods are found in 8-page illustrated bulletin 1848. Three principle types of motor bearings-cartridge, standard open and Lubriflush types—are explained. Series of color photos shows action of re-lubrication in Lubriflush bearings.

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Pipe & Cable Finder

Fisher Research Laboratory, Inc.—M-Scope pipe finders, leak detectors and water level indicators are described and illustrated in two illustrated booklets of 12 and 8 pages. How the electronic instruments are used, their operation and various models are covered.

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Electrostatic Painting

Ransburg Electro-Coating Corp.—16-page illustrated bulletin devoted to No. 2 Electro-Spray process is a case-history type presentation showing cost savings made in 27 widely varying production painting jobs. Company laboratory facilities are pictured and complete information on parts test procedure is given.

For more details circle NED-995 A4 on enclosed inquiry slip

Pneumatic Time Delay Relays

Elastic Stop Nut Corp. of America, A.G.A. Div.—Line of solenoid-actuated pneumatically-controlled time delay relays is described in illustrated bulletin SR-3. Types include totally-enclosed, auxiliary switch, double-head and proportional delay units with voltages ranging from 6 to 550 v ac and 6 to 230 v dc. Dimensions, wiring diagrams and applications are covered.

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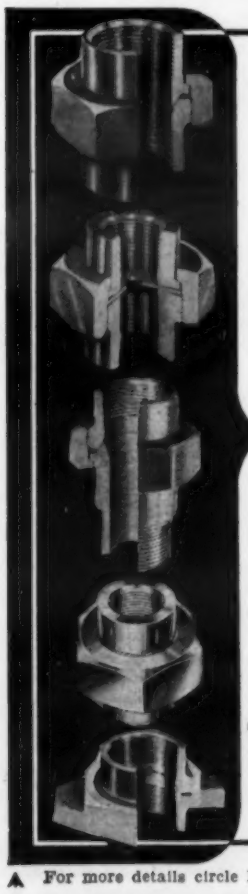

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DO YOU KNOW? Parts 60 ft long and even longer are milled successfully with an Onsrud automatic contour milling machine. Work beds can be supplied in any required length, beginning with a basic length of 30 ft and increasing in increments of 15 ft. Machines are made by Onsrud Machine Works, Inc., 3956 Palmer St., Chicago 47, Ill.

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YOUR CONCRETE FLOORS CAN RESIST ACIDS AND HOT METAL

WHEN REPAIRS ARE MADE WITH

STONHARD STONPACH

ONLY A HALF-INCH TOPPING NEEDED FOR A FLINT-HARD SURFACE

A patch or complete overlay takes less time to install and outlasts concrete many times over. ALL INGREDIENTS COME COMPLETE IN ONE PACKAGE—Write today for our free STONPACH Booklet and trial offer plan.

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Building Maintenance Materials since 1922

101 Stonhard Bldg., 1306 Spring Garden St., Philadelphia 23, Pa.

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Company ..... Title .....

Address .....

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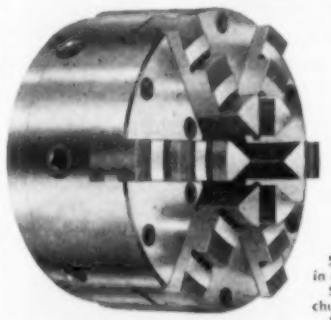
YOU SAVE Every Time You Use Buck



AJUST-TRU Pat. No. 2639157

CHUCKS

This is the only universal scroll chuck with .0005" precision. It is used on lathes, grinders, dividing heads, screw machines. Does most of work formerly requiring stub arbors, mandrels, special fixtures.

6 JAWS

OR 3 JAWS

3 jaw and 6 jaw models in 4", 5", 6", 7½", and 9" sizes. 2-jaw Aviation chucks, for holding odd shaped parts in 6", 7½, and 9".

Save machinists' time — lines up dead true in *one* minute, without shims . . .

Save operators' time — holds .0005" rechucking precision on duplicate parts . . .

Save collet and step-collet costs — the AJUST-TRU does the work of hundreds of dollars worth of collets . . .

Save distortion on tubular work . . .

Save scratches on ground, polished, work . . .

Save time and expensive holding fixtures on many grinding operations . . .

Save chuck wear — it takes up wear in use . . .

More than ever today, you need the economies of Buck chucks. Send for latest catalog.

BUCK TOOL COMPANY

122 Schippers Lane • Kalamazoo, Mich.

NEW SUPER-GRIP 4-JAW

INDEPENDENT CHUCK FOR 9" to 16" LATHES

Most chucks for 9" to 16" lathes are either too light and cheaply made to hold work securely, or too heavy for the lathe and clumsy to handle. Here's the happy medium — a chuck with ideal weight, providing much more "holding power" from its ⅛" larger diameter, finely threaded screws. Also eliminates ⅝" overhang . . . improves accuracy . . . permits heavier cuts. 6", 8" and 10" models. Send for latest catalog.

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750 DIFFERENT CABINET COMBINATIONS

Available for Small Parts Storage, Handling or Display. A Type and Size for Every Need.

We can supply you the perfect cabinet for your particular requirements. 750 different combinations can be CUSTOM - BUILT at production line prices. Free catalog upon request.

AKRO-MILS, INC. Box 989-E AKRON 9, OHIO

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6-inch Plant Wrecker

Just an ordinary, harmless bolt, but mixed with materials going through a pulverizer, it not only wrecks equipment, but can spark fires and explosions causing thousands of dollars damage.

Keep this troublemaker out with a Stearns spout magnet! Easily installed in conveyors, feed chutes, etc., powerful Stearns spout magnets automatically trap and remove tramp iron buried in bulk materials entering plant.

Stearns electro spout magnets provide a strong, deep magnetic field — are automatically cleaned. Open conveniently located switch and tramp iron drops out — close switch and magnet is again in operation. No ladders to climb — no hand cleaning.

Reduce damage, cut insurance rates with a Stearns electro or permanent spout magnet. Write for Stearns Bulletins 92F and 97E today!

Stearns AAA spout magnet discharging tramp iron.

1067

MAGNETIC EQUIPMENT FOR ALL INDUSTRY

STEARNS MAGNETS

STEARNS MAGNETIC, INC.
653 S. 28th Street, Milwaukee 46, Wis.

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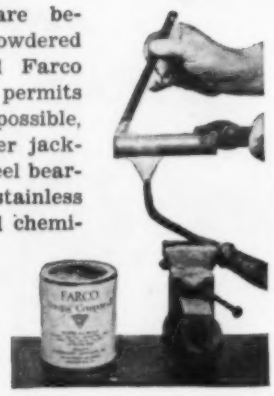
TINS ALL METALS



Difficult tinning problems are being solved with a new powdered solder containing flux, called Farco Tinning Compound which permits jobs heretofore considered impossible, such as tinning cast iron water jackets and cylinder heads, cast steel bearings, pipes, cylinders and stainless steel equipment. The powerful chemical formula will lift the oxides from aluminum, and on other metals is more drastic than ordinary acids. Makes it possible to lift the scale and tin black iron in one operation. Stability of the new powder makes it possible to judge heat on large bearings by its action in turning liquid when proper temperature for tinning is reached. Although strong enough to remove scale, dirt, and tin rusty surfaces thoroughly, it is completely stable and will not liquefy in can. When used on gasoline motors, Diesel and marine engine bearings it is reported to increase performance life 100%. The compound may be applied with either torch or soldering iron depending on thickness of metal, and any good grade of solder may be used. Packaged in 1½ lb. cans, price $3.00 f.o.b. *Advt.*

FARRELLOY CO.

1246 North 26th St. Phila. 21, Pa.

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NoDrip ...STOPS CONDENSATION DRIP!

NoDRIP PREVENTS RUST
in addition to stopping drip and keeping floors dry.

ANYONE CAN APPLY
Brush, trowel or spray NoDrip on tanks, condensers, suction lines, vats, pipes, walls, ceilings, etc. NoDrip adheres to metal, concrete, brick, plaster. It forms a seamless covering that is effective as soon as dry. Acid, alkali and brine resistant.

Interesting 32-page Handbook shows what NoDrip is and what it does. It's free. Send coupon today.

☐ SEND NoDRIP HANDBOOK
NAME .....
COMPANY .....
ADDRESS .....
CITY ..... STATE .....

J. W. MORTELL CO., 526 BURCH ST., KANKAKEE, ILLINOIS

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HYDRAULIC COUPLING
tightened by hand without tools

Only a twist of the wrist is required to engage or disengage the Hydrolock coupling, made with type 303 stainless steel seat and tip. Capable of withstanding high pressures without leaking, it is noncorrosive and employs a metal-to-metal seal. Outer casing of the handgrip overlaps the adapter to the extent that when it is being disengaged, the steam, air or fluid is forced away from the operator. Model is available with automatic shutoff that prevents escape of line contents. Another has a safety lock which requires a one-half turn. Made by **Rico Enterprises, Inc.**, R.296 Sheridan Ave., Mansfield, O.

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SOLVENT EMULSION CLEANERS
250° F flash point for extra safety

A high flash point of 250° F that will not vary, even when heated, lends an extra margin of safety to Navee '53 and Hi-Flash, two solvent emulsion cleaners. Both products are safe to use on aluminum and other soft metals. Navee '53 is extra-heavy duty degreaser for removing hardened, oxidized and burned-on oils and grease, as well as carbon stains, preservative coatings, lead oxide, packing greases, asphalt tar, resins, printers inks, etc. It mixes with 5 to 10 parts water and has rinsability of a detergent. Hi-Flash is designed to remove drawing, cutting and lubricating oils as well as buffing and polishing rouges from metal parts. It can be used concentrated or mixed with water; at room temperature or hot. Formulated by **Penetone Co.**, Box ND-154, Tenafly, N. J.

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AUTOMATIC DRILL UNIT
can be mounted at any angle

Self-contained automatic drill unit has a constant bath of sealed-in lubricating oil for all moving parts. Redesigned model incorporates an intermittent duty ball bearing motor and automatic forward and reverse movement of the drill spindle. It can be mounted in any angle or plane. Several of the drills can be operated simultaneously from a single start button or wired to operate in conjunction with a rotary index table. Units are available from No. 50 to 5/16-in. diameter drills. Made by **Simplex Tool Engineering Co.**, 2542 Park Ave., Detroit 1, Mich.

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SAVE TIME & MONEY ON INSPECTIONS

Fine, Imported Instrument Available at 50% Saving

STEREO MICROSCOPE
FOR INDUSTRIAL OR HOBBY USE

WIDE, 3 DIMENSIONAL FIELD

Excellent Depth for Working Under Magnification!

$160 Value **Only $85.00** Pstpd.

Now, for the first time — a fine, imported Binocular Microscope at a substantial saving. Will pay for itself over and over in speeding, improving quality control. EDSCORP Stereo Microscope can be used for inspections, examinations, counting, checking, etc. Fixed 3 power objective with 3 pairs of matched eyepieces to give you powers of 15X, 30X, 45X. Rack and pinion focusing. Interpupillary adjustment. Instrument is removable from base for mounting on equipment or bench. Working distance — 2¾". Adjustable for extra height. Fine hardwood case included. Recommended for lab, shop, factory or home use. We guarantee complete satisfaction or your money back.

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EDMUND SCIENTIFIC CORP., Barrington, N. J.

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Black & Decker OFFERS WORLD'S MOST COMPLETE LINE OF PORTABLE ELECTRIC DRILLS

TOWSON, MD.— The wide selection of drills in the complete Black & Decker line includes the right tool for any portable drilling job. These models range from ¼" to 1¼" capacity . . . offer a choice of speed, power, and handle arrangement for easiest operation. Whether your job calls for a standard or a heavy-duty model, you get a powerful B&D-built motor, perfect balance plus all the stamina Black & Decker knows how to build into a tool. For demonstration, see any B&D distributor. For free literature, write: THE BLACK & DECKER MFG. CO., 609 Pennsylvania Ave., Towson 4, Md.

B&D 1¼" Heavy-Duty Drill

B&D ¼" Heavy-Duty HOLGUN® Drill

LEADING DISTRIBUTORS EVERYWHERE SELL

Black & Decker PORTABLE ELECTRIC TOOLS

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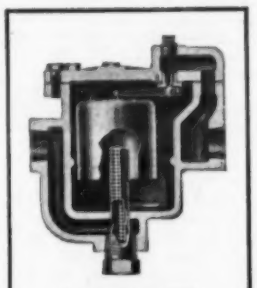
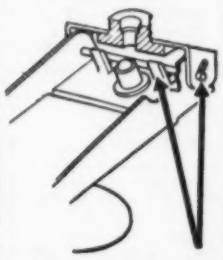
NEW TRAP



Sarco *Camlift* Bucket Trap



Cams lever valve off seat; slot and pin provide maximum valve opening

handles more volume in less time!

Sarco uses the principle of the fulcrum and lever in this newly designed trap and gives you greater discharge at no increase in trap size. Result: more for your steam trap dollar.

It's all made possible by the Sarco *Camlift* valve mechanism which provides the force needed to open the large valve without a corresponding increase in trap size.

See for yourself how this small inverted bucket trap gives you maximum capacity.

Write for free trial trap giving pipe size, capacity, and pressure conditions.

SARCO COMPANY, INC.
EMPIRE STATE BUILDING, N. Y. 1, N. Y.

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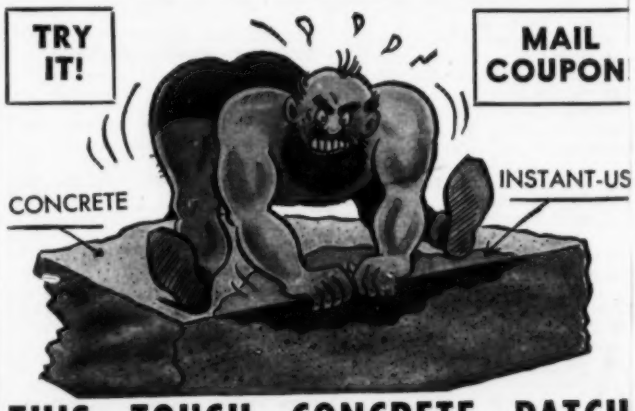
TRY IT! MAIL COUPON



THIS TOUGH CONCRETE PATCH SETS INSTANTLY!

Repair broken factory floors without the usual traffic tie-up. Simply shovel INSTANT-USE into hole or rut—tamp smooth—truck over! No waiting! INSTANT-USE bonds tight to old concrete . . . right up to a feather edge. It's tough. Wears like iron. Won't crack or crumble. Install complete overlay where floors are badly chewed up. Used indoors or out. Immediate shipment.

MAIL COUPON for TRIAL OFFER and FREE HANDBOOK

INSTANT-USE

FLEXROCK COMPANY (Offices in principal cities)
3603 Filbert St., Philadelphia 1, Pa.

Please send me complete INSTANT-USE information, details of TRIAL ORDER PLAN and HAND BOOK OF BUILDING MAINTENANCE—no obligation. (Clip and attach Coupon to Co. letterhead).

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Address .....

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